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CAMERA CRAFT

A Photographic Monthly

George Allen Young, Editor

445848

Volume XLIV January to December, 1937

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CAMERA CRAFT



"Ku"

Horace Bristol

January 1937

NOTES ON PORTRAITURE

SOCIAL DYNAMITE

PHOTOMACROGRAPHS

MAKING 16 MM INDUSTRIALS

PRICE 25c

Stanley R. Jordan

Horace Bristol

Harold Sorbye

H. B. Butler

FIGUREHEAD



No whitening was used on the model's body. There is no effort to represent it as other than that body. "Hyper-whitening" is accomplished by avoidance rather than direct means. The Plastic Light is most effective if the skin has a slight glow that gives added emphasis to the high-contrast. Moreover, the slight perspiration that comes from working under the light is just right for this purpose. Should this perspiration be lacking, a tender oil will be obtained if the model rubs her body with soap and water and lets it dry.

[illegible]

NEER use will be employed for the highlights on a slide basis. The effect, though perhaps beneficial, is that it is not possible to check the text of the slides. The result, instead of displaying these qualities of both text and image, is that there should be coherence in the mind, looks dull, distracting and useless. Nor is the practice justified by any increase in photo-graphic quality and readability. In the contrary, adding its bulky targets, slates and contraptions the natural readability of the figure is given up. The slide is a poor medium for the display of figures in places where we have to have our audience to be in a condition of control not employed in making this picture, past-tense picture being to have to preserve the bottom gear turn of the background, so there is no time for this picture. It is a possible through the added sequences of the black-outlined with text, grows to be the increased dominance to the modeling of the

[illegible][illegible]

The joys of the present is the glow of land
The lust of the east is the sunsets of land
The wrath of the law is the madness of land
The treachery of a nation is the north of land

The illustration on the opposite page, and the one on the next, are the work of a native artist, and are a credit to the taste, simplicity and pictorial sense of the native intelligence of the people that dwell in the universal wilderness. In order that a better idea may be given of the character of the work, a sketch of the scene represented in the picture is here given, and is accompanied by a description of the scene, and a list of the names of the persons and animals represented in the picture.

1. The first thing I noticed when I stepped
 out of the plane was the fresh air. It felt like
 a warm blanket after a long, cold winter.
 The sun was shining brightly, and the birds
 were singing. It was a beautiful sight.
 I had heard that the weather was perfect,
 and now I knew it was true. The air was
 just what I needed. I had been thinking
 about this trip for a long time, and now
 it was finally here. I was so excited.
 The first thing I did was to go to the
 beach. The sand was soft and warm.
 I had heard that the beach was beautiful,
 and now I knew it was true. The water
 was clear and blue. It was a beautiful
 sight. I had heard that the water was
 perfect, and now I knew it was true. The
 beach was just what I needed. I had been
 thinking about this trip for a long time,
 and now it was finally here. I was so
 excited.

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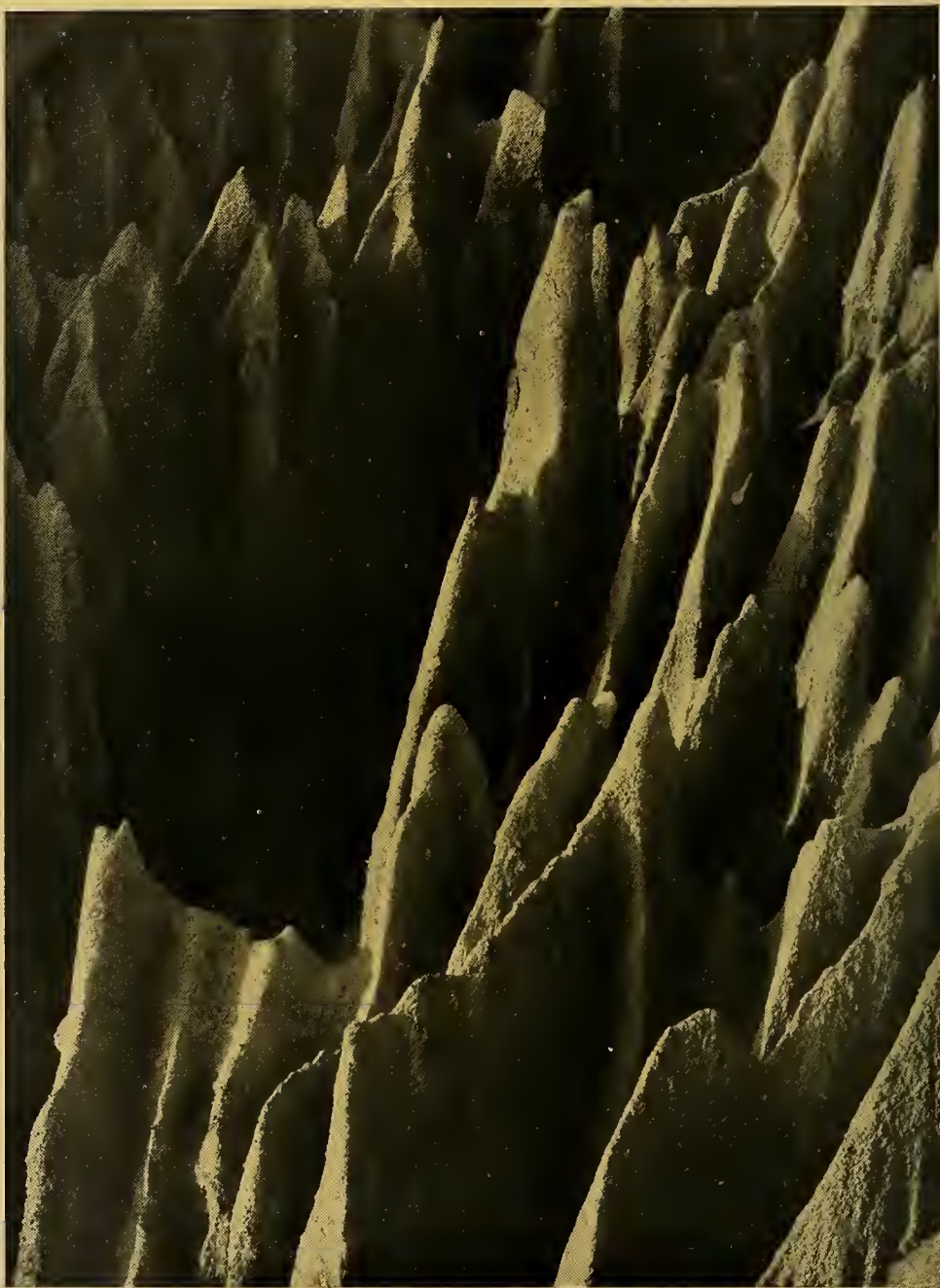
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"Water Gully"

P. Douglas Anderson, F.R.P.S.

The Miniature Camera: Social Dynamite!

Horace Bristol

IN a world of strikes and lynchings, towering bridges, tumbling slums, child-labor and society weddings, jumbled together in a magnificent hodge-podge, where it is all but impossible to point a camera without including significant documentary evidence of contemporary civilization, the average snap-shooter packs his Kodak beside the pickles of the picnic lunch, all unaware that ounce-for-ounce, his piece of glass, leather and steel is more potent than TNT.

Potent to blast at ignorance, hypocrisy, and smug self-satisfaction; to mirror the passing scene with its beauty of form and color; to reveal the pustulous sores of dirt, disease, and poverty which disfigure the social body. At a time when powerful forces are active in the world in the suppression of free expression, twisting, warping the truth to fit their own purposes, the cheapest box Brownie can serve as an efficient siege-gun in the fight against oppression of all kinds.

For the camera, recording with infallible accuracy the present conflict, does not lie, cannot be denied. Even when one voice might be shouted down, one tongue discredited, the impartial eye of the camera projects an image that all can see, each can understand, and none contradict.

That is why the camera is a potential force today, whether or not one out of a thousand realize its potentialities.

But what an insight the lens gives to the life and outlook of the nine hundred ninety and nine amateurs who snap the shutter throughout the bright sunny Sundays—yes, and during the week days and nights, for that matter. Baby's first step, landscapes from the vacation with a blurred figure of sweetheart or wife in foreground, the new car, assorted still lifes, a wide selection of nudes in voluptuous poses;—good, bad and indifferent in technique and conception, each and every one is a photographic document attesting the creator's state of mind, and, in a general way, the state of the world we live in.



"Organization of Alaskan Cannery Workers"

Horace Bristol

Taken through car window. Contax, F:1.5 Sonnar; 1/100 sec. at F:5.6; Velour Black T, in Amidol.

Commendable, surely, but not enough for the serious photographer. Blessed with a hair-trigger medium of expression, capable of recording the most minute detail of a complex world with simple, sparkling clarity, the social photographer has but one problem. No matter where he goes, wherever he may focus the curious eye of his camera, the universe palpitates on his ground-glass.

His problem, then, is to analyze critically the material at hand, and with judgment untempered by mercy, eliminate all but the significant.

To a field in which such workers as Paul Strand, Steigletz, Edward Weston, Dorothea Lange, and Ansel Adams are veteran laborers, a newcomer can offer only a fresh point of view and a new technique. Fortunately, each of us, regardless of ability, has a fresh viewpoint. As for a new technique, Leitz and Zeiss with their miniature cameras have offered that for a not excessive cost to the rankest amateur. Early documentary photographers, from Hill and Brady to contemporary workers above mentioned, by the very size and cumbersomeness of their equipment, have been forced to record the more static aspects of life as they saw it. The notable exception to this is the work of Dorothea Lange, who has produced some of the most understanding photographs of our time (or any other) with a Rolleiflex.*

* See October 1934 issue of *Camera Craft*.—Ed.



"Worker in Concrete"

Horace Bristol

Taken from some distance without knowledge of subject who was shoveling concrete into forms. Contax; 85 mm. F:2 Sonnar; 1/100 sec. at F:5.6, on E. K. Panatomic, in DK-76.

It is the truly candid camera, however, such as the Contax or Leica with their ultra-speed lenses, which reveals new fields for the social document.

To reproduce even one facet of this shining new world in silver grains on gelatinized paper assumes the character of an adventure, a crusade, a life work.

With more enthusiasm than experience, I believe it is possible for the greenest tyro to produce sincere photography with sound social background.—This in spite of six years spent in photographic study and practice here and abroad. The hours of that time wasted in search of a



"Child Labor"

Horace Bristol

Contax; 50 mm. F:1.5 Sonnar; 1/50 sec. at F:2 in complete shade; print on Velour Black T, in Amidol.

rational approach to photography, wasted groping for aesthetic justification of the photographic medium, should be spared the worker who understands that faithful reproduction of life itself serves as its own justification.

Perfection of technique—that is another matter. But not an essential one.

The photographer with something to say will say it in spite of fogged negatives and muddy prints.

Fundamentals of technique are not difficult to master, especially with the miniature camera. Meticulous care and exactitude solve most of the problems, and, once the beginner discovers the delicate, subtle nuances inherent in a perfect silver bromide print, nothing short of perfection will satisfy again.

How that perfection is to be obtained he must discover for himself. Only experience will give even a reasonable percentage of success. There are, however, a few simple statements that may help. First and foremost is that no over-developed negative will yield delicate prints. Much latitude exists in the film, it is true, but a heavy deposit of silver can never deliver luminous shadows and sparkling highlights by enlargement. On



"When You Say That—Smile"

Horace Bristol

Taken through car window. Contax; 50 mm. F:1.5 Sonnar; 1/100 sec. at F:4.5.

the other hand, no under-exposed, or under-developed negative will really do justice to the shadows. This applies, of course, to the subject with average contrasts. Extreme contrast or lack of it will require special treatment; over-exposure and under-development in the first case, under-exposure and over-development in the last.

While perfect balance is the desideratum, the novice is safer in over-exposing, with normal development, trusting to the softer papers to save tonal values. Personally, I prefer my Contax negatives slightly on the under side (if they can't be perfect) developing in any phd formula, usually micrograin 85. With 4x5 cut film, when texture rather than action are paramount, I purposely under-expose slightly, building up the silver image with slight over-development in semi-fine grain pyro formula in which acetone replaces the carbonate.* Pinacryptol green allows partial inspection after two minutes. Prints from 35mm and 4x5 negatives are made on glossy paper, developed in amidol. Defender S and T are especially useful, although I use PMC normal and contrast to supplement the regular grade Velour Black, and when necessary, Brovira soft. This is

*Water.....	1 gal.
Metol.....	135 gr.
Pot. Metabisulphite.....	33 gr.
Pyro.....	3 1/2 oz. 77 gr.
Sod. Sulphite.....	2 oz.
Acetone.....	3 oz.
Pinacryptol Green 1/500.....	1 oz.

probably an unnecessarily confusing selection, but I have found it adequate to meet almost any situation.

Dupont Superior film is used throughout for miniature and 4x5 cameras. With proper handling, the 35mm film developed in phd shows negligible grain up to 10x12 size. It is a decided satisfaction to know that the camera is always loaded with the fastest film in general use, and, should an emergency arise requiring ultra-speed the film may be developed in Buffered borax for a maximum silver deposit.

Although the universal impulse of the miniature camera enthusiast seems to be the acquisition of accessories, I have limited my equipment to the F:1.5 Sonnar and the 85mm f2 semi-telephoto. That, with the old model Contax, necessary lens shades and film magazines, constitutes my outfit.

I have tried repeatedly to use my Graphic or Graflex for social photography. Something about the size or the professional appearance of these cameras defeats my object of an unposed shot. For truly candid work either is out of the question when unawareness is a prime essential, as it should be in every honest document. I realize that some of the finest news photographs are made with a Graphic and synchronized flash. These are taken, I'm willing to wager, by those who expect but one negative. And usually motivated by a more or less unsympathetic attitude of mind. Good, never-the-less; perhaps because of this fact.

Most of my work is "stolen." In other words, it is taken without the knowledge or consent of those photographed. Many are taken through car windows, from other points of vantage where I can observe without being observed. I make no apologies for this. Only in this way am I able to present my subjects as they are, rather than as they would like to see themselves. Assuming that they would enjoy being photographed, which is not always the case.

With a world in flux before your very finder it is impossible not to press the shutter release. Not merely on the waterfront, the park bench, bread line or among the world's dispossessed; social dramas are being enacted wherever people gather—sometimes where they don't—witness the drought areas. In crowded subways, down park lanes, aboard commuter specials, at the big game or fashionable lynching, each has its place in our social scheme, each should find permanent display in the gallery of our civilization.

In short, wherever the photographer can go, the camera can follow. So long as the eye can see, the lens can record.

This is not the literal truth, but such experts with the miniature as Peter Stackpole manage 1/5 to 1/2 second exposures without a tripod. I don't choose that slow a speed, but there is little an F:1.5 lens won't record at 1/2 second. Naturally, I prefer higher speeds when possible, even at the sacrifice of depth. Seldom is a slower exposure than 1/25 of a second an absolute necessity, however.

As yet no camera, to my knowledge, has been trained in pure satire on the foibles and frailties around us in our every day life. That is a field—decidedly.



"Savage Klein"

Horace Bristol

Contax; 85 mm. F:2 Sonnar; 1/200 sec. at F:5.6, on Dupont Superior, in Micrograin 85. Taken on beach, slightly overdeveloped losing texture and tone quality in shirt. Print on Agfa Brovira Soft.

The American scene has been done time and again from an architectural viewpoint. Who can say over-done? Fifty years, seventy-five years from now, if our prints last that long they will be worth—a laugh—if nothing more. But people, men and women from all walks of life, will probably not have gone completely out of fashion by 2000 A. D. (poison gas not-with-standing.) A sympathetic study of rich-man, beggar-man, merchant, thief will evoke the same response when the gelatin of our prints has turned a sickly yellow.

And that man whose courage, villiany, or simple ignorance lives immortalized through your print may still present a physical image in sharp outline on the retina of future eyes—this is a small thing, but enough.

Notes On Portraiture

Stanley R. Jordan



"Stanley R. Jordan"
Crompton

THE first and in my opinion, the most important accomplishment of the portrait photographer is to develop a style or technique by which his work can be identified among a group of photographs. It is a matter of common knowledge that the work of great painters have been identified hundreds of years after the death of the artist by the technique which is characteristic of each man's work. There are photographers living today whose style is so familiar to most of us that we can name the photographer by looking at his pictures. The possibility that it may require several years to perfect a style will not discourage those who have the necessary courage, intelligence and energy to make a success of portrait photography.

Artificial light and ultra rapid negative material are probably the most important factors in the progress of modern photography. A discussion of portrait lighting sooner or later leads to the subject of equipment of which there is a great variety. The selection of equipment is comparatively easy for the experienced photographer who has, as I have suggested, developed a definite style. The portrait photographer will be repaid many times over for a liberal amount of time consumed in experimental work if it is intelligently done. Mistakes in the selection of equipment can be very costly as many can testify. The beginner can assemble a temporary lighting outfit by purchasing some tin dishpans at the dime store and wiring them for photoflood lamps. I once saw a pretty good spot light made from a large coffee can.

I am not going to illustrate this article with floor plans and lighting diagrams because it would be a needless repetition of material already



Fig. 1.

Stanley R. Jordan

*Illustrating one of the advantages of having ample reserve light in the studio.
 $\frac{1}{2}$ sec. exp. f 32 Eastman Port. Pan $8 \times 10-16\frac{1}{2}$ inch. Goerz 5000 Watts.
3 lights.*

available to anyone interested. There are several good books on lighting, two of which I consider excellent because they stick to fundamental principles giving each photographer an opportunity to work out his own interpretation. I refer to "Studio Portrait Lighting" by Herbert Lambert and William Mortensen's "Pictorial Lighting".

The lighting requirements of a studio can easily be determined by logical analysis. For example let us assume that lighting equipment is required for portraits of children. Because young children move rapidly the studio should be equipped with sufficient light for exposures of $1/25$ second or even faster. There is a *minimum* and if, for example, an F 4.5 lense is used at full aperture, in order to use the same shutter speed, it will be necessary to double the light value for each smaller stop used. Thus far, we have only considered the light necessary for the subject with reserve power for short exposures at full aperture or shots with the lens stopped down for increased depth of focus. Background lighting should be independent and separate pieces of equipment should be used for the purpose. Dark backgrounds are not suitable for child portraiture so enough light should be available to give a range of background tones from gray to white. A "high key" portrait has an extremely short range of tones from gray to pure white. For "high key" work sufficient light must be provided to literally burn the background portion of the negative black with silver deposit. Lighting units for child portraiture should be equipped with reflectors designed to give a broad pattern of illumination. Diffusion of lights is sometimes necessary for very young children and exposures must be adjusted according to the kind of diffusion used. Spotlights are generally unsatisfactory for child portraiture because the highly concentrated beam of light produces heavy shadows.

The above example is a lighting problem reduced to its simplest elements. There are, however, many other factors which must be considered. The longer the focal length of the lens the "thinner" the plane in which everything is sharply in focus. By "stopping down" the lens we can increase the depth of focus but this requires more light or increased exposure. Exposures of more than one-half second for adults are likely to result in many spoiled negatives due to motion of the subject. The portrait of the girl with a dog (Fig. 1) is a good example of the importance of reserve light. It was necessary to stop down to F 32 in order to obtain critical sharpness in a plane of about seven feet but the exposure was only one-half second.

Underexposure can frequently be traced to one or the other of two common causes. The first is due to errors in the judgment of the distance from light source to subject. It must be remembered that if a lamp is four feet from the subject moving it two feet further away does not merely double the exposure—it *increases the exposure four times*.

The other cause is the result of failure to increase exposure for bellows extension. Exposure meters give the required exposure for the various apertures when the lens is focused at *infinity*. In studio portraiture many shots are made with the camera so close to the subject that the bellows extension must be considered in exposure calculations. A simple



Fig. 2

Print from an unretouched negative. Note the lines of expression around the eyes and mouth which make this a natural and characteristic portrait.



Fig. 3

Print from the same negative after retouching. The instructor was instructed to retouch the negative as he would for a family portrait studio.

method of determining the increased exposure is as follows. Measure the distance from the center of the lens to the film or plate. Divide this distance by the focal length of the lens (in inches) square the result and you will have the number of times the exposure must be increased.

Other factors to be considered in connection with exposure are film speeds, filters, diffusion of lights and the costume of the subject. It is surprising how much light can be reflected to a girl's face from a white dress.

Abuse of the art of photographic retouching is, in my opinion, one of the worst evils in portrait photography today. (Fig. 2-Fig. 3.) Many photographers deliberately change negatives to the extent that there is little more than a resemblance between the subject and the photograph. It has reached a point where many people say, in reference to proofs, "Oh these are only proofs—the finished pictures will not look like these." Many photographers apparently believe that there are mysteries about retouching a negative known only by retouchers. On the other hand there are plenty of retouchers who seem to think that a photographer expects them to do wonders with negatives—and they certainly try to live up to expectations.

A friend of mine while attending a convention in New York recently needed some photographs in a hurry for publicity. When proofs were submitted the photographer asked my friend what age he would like to appear to be in the finished picture—it was explained that by retouching a change of 15 years in appearance, younger or older, could be made.

I do not argue that negatives should not be retouched. It is my frank opinion, however, that when retouching is carried to the point of changing the character, age or general appearance of the subject the result is no longer honest photography.

It is a good idea to discuss every negative with the retoucher, giving precise instructions covering everything that is to be done. Retouchers should never be allowed the privilege of doing unauthorized work on negatives. Proofs should accompany every negative to facilitate the giving of instructions to the retoucher.

Choice of lenses as far, as I am concerned, is limited to the anastigmats produced by two or three manufacturers. No magazine with family circulation would print my opinion of "soft focus" lenses.

The so-called "legitimate" studios have, particularly during the recent depression, complained bitterly about the "dollar studios." As a matter of fact the "legitimate" studios were largely responsible for this new competition because many of them were charging high prices for photographs which, in artistic and technical quality, could scarcely be distinguished from the product of the "dollar" studio. The public could easily reach this conclusion by a casual inspection of the samples displayed in the show cases in front of the average studio.

The "dollar" studio advertised pictures for a "dollar" at a time when economic conditions made photographs a luxury for many. Thousands of people paid the dollar and were satisfied that they got their money's worth. Of course there were dissatisfied customers too, but the average American does not worry very long about a dollar particularly when he didn't expect much when he spent it. What the future holds in store for the portrait photographer depends largely upon the so-called "legitimate" studios. If they grind out pictures instead of real portraits in an effort to meet the price of every "gyp" outfit that blows into town, portraiture will remain on a low level.

The success of the "dollar" studio is largely due to standardized methods. "Large heads" are comparatively easy and are the most common style of photographic portrait. Lights can be set up and three or four standardized poses made in a few minutes. This idea, executed by cheap labor has kept the smoke pouring from the chimneys of the "dollar picture" foundries for several years.

When the purchasing power of the American people returns to normal as it is sure to do there will be a demand for better portraits at prices that will be profitable to the photographer. But the public will demand far more for their money in the future because they are learning the difference between good and bad photography. Magazines going into the modern homes are illustrated almost entirely by photographs, many of them, made by men of world wide reputation. Art galleries now generally exhibit photographs and the camera clubs are increasing public interest in photography everywhere.

With the growing popularity of miniature cameras many amateurs wonder why they are not in general use among portrait photographers. First there is the psychological problem of gaining the confidence of the subject, to whom a miniature camera looks like the ordinary Sunday picnic snapshot camera. The principal objection however is that the negatives are so small that it is extremely difficult if not impossible to retouch most of them. Dust spots on a miniature negative, magnified in enlarging, can be



Stanley R. Jordan

A closely framed head in which the telephone plays an important part in the composition.

extremely annoying as anyone who has had the job of spotting a large number of prints can testify. The professional photographer has a deadline for his work, much of which is done by assistants. The amateur photographer has the advantage of plenty of time and he can give his personal attention to every step in the making of a picture.

I have seen some beautiful portraits made with miniature cameras and enlarged to about four or five times in size. Miniature camera users would, in my opinion, make far better pictures if they would confine their enlargements to a reasonable size.

A simple and well organized darkroom procedure is essential to the success of the portrait photographer. The first requirement is that a minimum number of items of sensitized material be used. The ideal, of course, is one kind of film (except films for copying, etc.) and one paper, both products of the same manufacturer. The logical choice of developers is the formula furnished by the manufacturer, one developer for film and one for paper. Some photographers are constantly changing and experimenting with films, papers and developers. Here is the way I settled the question a long time ago, for myself at least, of what developers, etc. are best. The manufacturer of the materials I use has one of the finest laboratories in the world and millions of dollars available for experimental work. If there is a possibility of improving the products of the company or the chemical formulas recommended, I am sure the scientists employed by the manufacturer will discover it long before I could.

Some very beautiful pictures have been made by processes commonly considered photographic. Bromoil and transfer, carbro and other processes are fine for the amateur whose chief interest in photography is amusement or relaxation. For the professional and serious amateur however, the bromide print has possibilities which, as a matter of fact, most of us have scarcely even approached.

Costume is extremely important, particularly in portraits of women. Many professional photographers make as many portraits as possible of women dressed in the latest fashions. This is supposed to be very good business and the practice is highly recommended by manufacturers of sensitized materials who point out that the woman who has been photographed wearing the latest thing from Paris will need new portraits in a few months. It is certainly good business to sell a woman as many photographs in different poses as possible. Gowns, furs and hats if properly used are valuable pictorial devices. But a photographer who induces a woman to pose in various costumes and then deliberately informs her a few months later that the portraits are "out of style" has only himself to blame if he loses a customer. If a costume is correct and is used as a part of an *artistic composition*, then the portrait will never be "out of style." (Fig. 4.) Many of the most magnificent portraits now hanging in the art galleries of the world were painted with the subject wearing the costume of the period.

I believe that the greatest opportunity in photography today is in the field of portraiture. A large number of young photographers, attracted by reports of large fees paid for advertising illustrations have a burning am-



Fig. 4.

Stanley R. Jordan

Changing styles will not take away the charm of this portrait because the hat is correctly used as a part of the composition of the picture.

bition to become commercial photographers. Some of the better known commercial photographers have made considerable money but profits in any business in these days of bitter competition soon attract chiselers and price cutters. If all the men who would like to be commercial photographers ever get to New York there will be a continuous row of commercial studios from the Battery to Harlem.

It would be a fine thing for photography if more professional photographers would take an active interest in camera clubs and submit pictures to salons. Many professionals feel that activities of this kind are only for amateurs. Unfortunately many camera club members take the attitude that the professional photographer is taking an unfair advantage when he submits pictures for their exhibits. As a matter of fact both professional and amateur will benefit from working together. Many a professional will have his eyes opened when he compares his prints with those produced by amateurs. And camera club members would have some standards to shoot at if they had a liberal number of professional prints among those submitted to club competitions. The best inducement the camera club can offer the professional to secure his active support is publicity. Having prints hung by the better salons sponsored by camera clubs often results in publicity that is more valuable to the professional photographer than paid advertising.

In conclusion, I should like to mention some of the qualifications which I believe the modern photographer should have. He will be honest not only in matters concerning money but in his attitude toward photography. He will consider the camera as a tool in the hands of an artist. He will not use it to imitate etchings, wood cuts, oil paintings or any other art medium. He will conduct himself and his business in such manner as to be a respected member of the community in which he lives. He will avoid displays of "artistic temperament" and association with "queer" people. He will have the courage to make portraits of his subjects as he sees them. He will be intelligent enough to know that there are some people in this world who can never be satisfied and he will lose a few dollars now and then rather than lower his standards of craftsmanship. And any man who does not like hard work should abandon all hope for success in portrait photography and search for green pastures elsewhere.

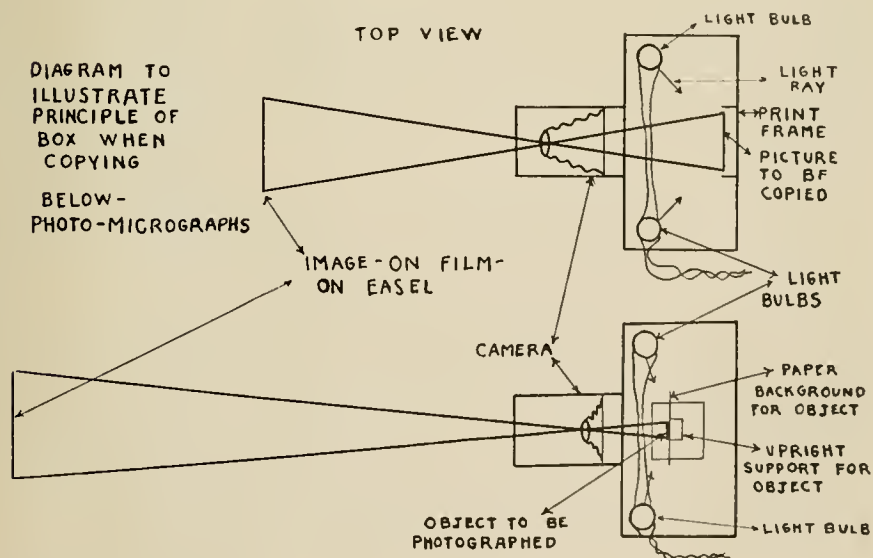
Photomacrographs And Copies With The Folding Camera

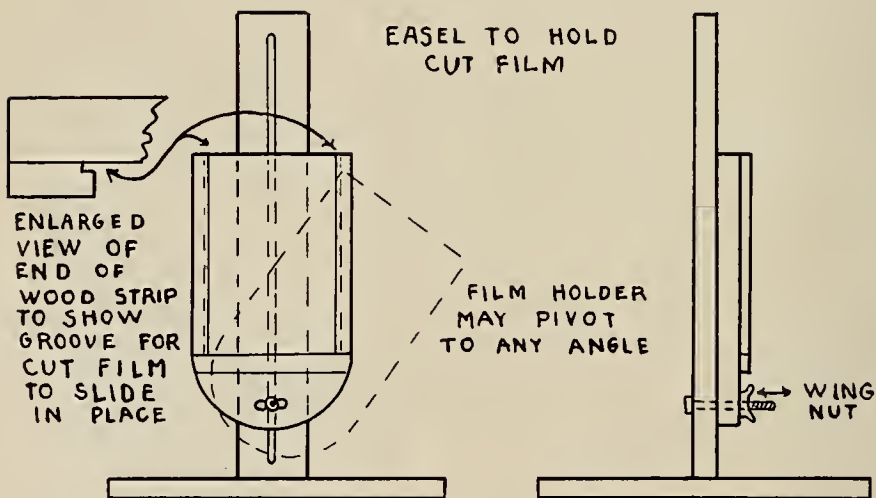
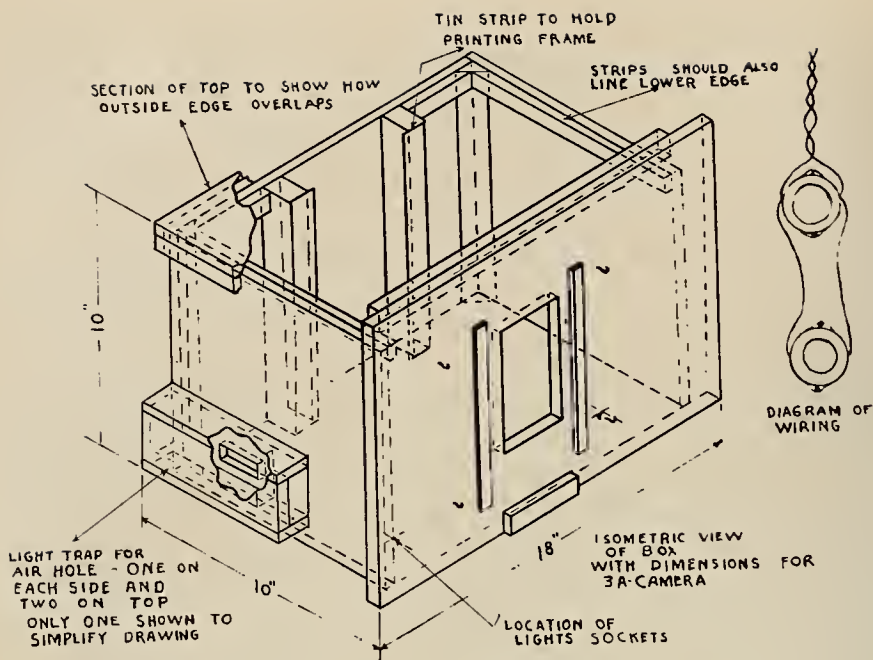
Harold Sorbye

PERHAPS you have often wanted to take pictures life size or considerably larger, but could not do so because you didn't have the equipment necessary. It is the purpose of this article to explain how any amateur owning a folding camera of 120 size or larger, and having access to a dark-room may do this work without any great expense.

It is really surprising how different many things look when they are enlarged only a few diameters. Many of the so-called "photo-foolers" are not much greater than life size, but are photographed in an unusual way. I have seen a picture of an orange which looked very much like the moon in second quarter. I believe it was an enlarged picture of a dried pea or walnut that looked like a brain.

When you copy a photograph or take a picture of an object, the light is reflected from the object, through the lens, and to the sensitive film. When we get close to the subject a longer bellows extension is necessary. This extension is very limited in the conventional folding camera. Our problem then is to find a way to overcome this difficulty. When we get close enough for life size pictures, the bellows extension, or distance from





the lens to the film is about the same as that from lens to the object photographed. For taking enlarged pictures the distance from lens to the film is much greater than from lens to object. If we should put the object to be photographed inside the camera, and the film outside, this long bellows extension would be unnecessary. Now if we could get a little light inside the camera as well as a little more room in there, and have no light outside, we could take pictures just about any size we wanted, being limited only by the quality of our lens. Think that over a while and then read on.

Our dark-room will exclude light from outside of the camera. If we



Outfit in Operating Position

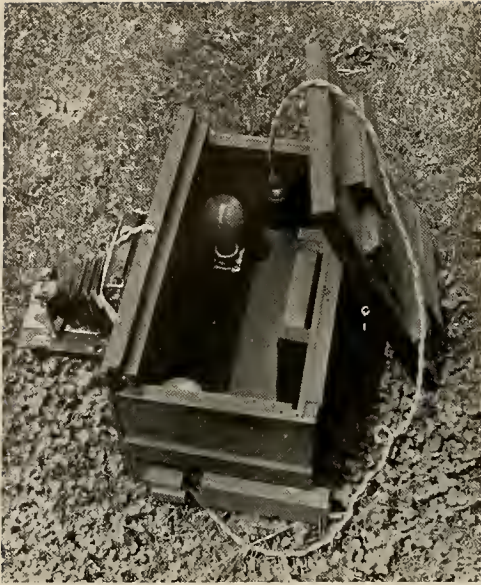
build a box behind the camera (with the camera back removed of course) and put a couple of lights in this box our problem is solved. Of course the box must fit up close to the camera and have tight joints so no light gets on our sensitive film which is outside. The box itself may be made of 1/2 in. or 1 in. pine boards. Get all the joints as tight as possible and place strips around the camera so no light escapes at this junction. We will also need a few holes for air to circulate so the box won't get too warm. To prevent light from getting out of these holes we must build around and over three of the sides and make the light go around a corner. If these are painted black inside, the light won't find a way around. A cover is needed which can be taken off and fit quite tight when on. The outside edges should overlap. The camera may be fastened to the front of the box with a couple of rubber bands. Of course there will be a hole in the box which the camera fits over.

Two 75 watt lights will serve for illumination. You can get sockets for these at ten cents each from a dime store. For A. C. current they should be wired in parallel as shown. Use insulated drop cord and attach a fixture to the other end of the cord so it will plug into a light socket. Since all of our light used will be by reflection, the lights should be placed as near the front corners as possible. We want them way over in the corners so the light will not get directly into the camera lens.

Paint the inside of the box black. This prevents stray light rays from being reflected to the lens and fogging the film. Only the object being photographed will then reflect light. Use "no-gloss", or "flat" paint.

I have found that a 3 A postcard camera works very well. An anastigmat lens is best although others will do.

An orthochromatic cut film of fair speed will be found satisfactory. 6½ x 9 cm. or a larger size will probably be needed.



*Interior of box
showing position of
lights.*

An easel to hold the film will be required. Nail to a base board an upright stick with a slot cut or sawed its entire length. The film holder will slide up and down in this by means of a single bolt and wing nut. A flat board a little larger than the film is used for this holder. Tack or nail a strip along each of two outer edges. These should have a groove cut away next to the board. The cut film can then be easily slipped in or out of this holder. It can be adjusted to any height, and the whole easel moved sideways, forwards, or backwards.

When you wish to use the box, place it, and the easel on a table. Fasten the camera in place. If copies are to be made the picture to be copied should be held perfectly flat, so it will reflect light evenly. Glossy paper works best. Put this picture in an ordinary printing frame and place this in an upright position in, and near the back of the box. Put the cover on the box and a piece of paper in the easel. Turn out all the lights in the room, except the red lamp, and put the light on in the box. Focus on the paper in the easel. The bellows or easel may be moved to do this. Turn off the light and replace the paper with a piece of cut film. Make the exposure by putting the light on in the box for a few seconds. This exposure time depends on the lens opening and amount of magnification. Develop the film in the usual manner.

With the following exceptions you can use a similar procedure for taking photo-macrographs. No printing frame is necessary. Suspend the object to be photographed to an upright stick supported by a small base board. A small piece of cardboard or similar material will do for a background. Put the object in the center of the box or closer for high magnification. The length of the bellows will be short and the lens must be stopped down to F:22 or less after focussing. It is necessary to use a small stop because the depth of focus decreases when the image size increases. If the



"Fishing Fly"

Harold Sorbye

Approximately six to eight times normal size. Made with a Rapid Rectilinear lens.

object is flat the small stop is of course unnecessary. The easel will be farther away than before. The exposure time will be increased considerably.

For a variety of effects you can decrease the power of one of the lights, or use only one light. Filters and pan film may also be used. The use of this film makes work a little more difficult.

By taking pictures 3 or 4 diameters and enlarging this negative 5 diameters, the result will be 15 to 20 diameters original size and cover about 400 times the area. The quality of the final print will depend upon the lens used.

Process Work Combined With Gradation On A Lantern Slide

Walter Barnes

PERSONS who make lantern slides may find help in two methods of combining a graded subject with process work on a slide (other than reducing and intensifying the line portion of the negative, as some texts advise).

1. To make a slide from a subject where the process work does not overlap the graded portion (as from the plaque shown in figure 1), a process negative may be made of the whole subject, and the contrast of the graded portion lowered by work on the negative until it is suitable for the positive material.

Local reduction of blocked highlights can be done by several washes of dilute reducer. If some of the solution attacks background adjacent to the highlight, a dash of opaque will repair the damage. A person who can use one of the abrasive reducers will be able to work on areas too small for chemical reduction.

The only remedy for really blank shadows is another shot, but if any modelling is in the negative, washes of New Coccine will bring the shadow portions up to printing density.

This work on the negative takes only a few minutes, in most cases. Graduation is shown along with fine black-on-white, and from a single negative. As the work is the reduction of contrast in the graded part, a print made for such a plaque should be flat.

II. For a slide in which process work (drawing, lettering, or figures) is to be superposed on a picture, the picture is printed on one slide, the process work on another, and the two bound in register.

If the graded slide is developed in a warm-tone developer which gives translucent shadows, black letters will show boldly even in the dark parts. I know of no other method which gives so fine an effect. (1).

The picture and the process slide will be bound face to face, so one or the other must be reversed by printing through the back of a negative. The steps of making such a slide are given, to suggest simple methods of reversal and of registration.

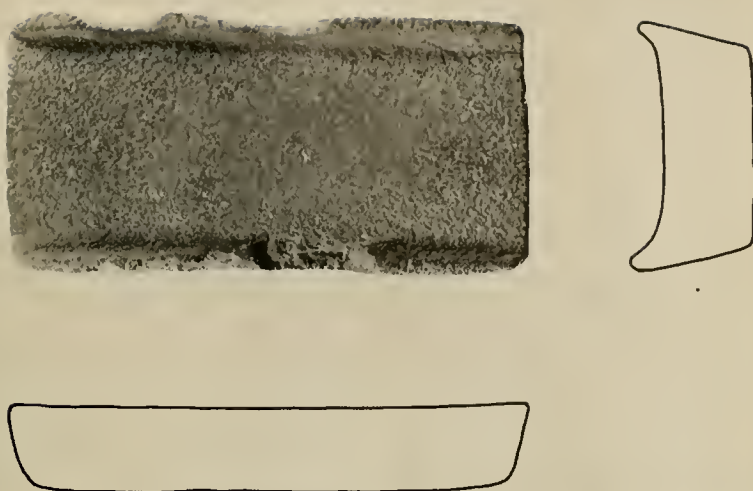


Fig. 1.

I usually begin with a 5x7 negative. A print is made, and the lettering or drawing is done on a piece of tracing paper laid over the print.

A graded slide is made from the 5x7 negative turned to give a reverse image. Then before the camera is moved, the negative is replaced by the tracing paper (backed by white card) and a process negative made of the drawing. This ensures the same reduction of lettering and picture, so that registration will be possible.

The finished process negative is laid on the printing box (butter-side up, as the graded picture has already been reversed), the finished graded slide is laid on it glass-side down, and marks are made when the two are properly registered. The plate to be printed from the process negative is placed on these marks, so that when it is bound with the graded slide registration will be good.

Alternately an unreversed graded slide may be used and the lettering reversed by printing through the back of the process film. In this case, the process film is placed butter-side down during the making of the registration marks, as well as during printing.

For contact printing through the back of a film, undiffused light is necessary, and the thin-base process materials made for lithographers and other reproduction workers are helpful. The remarkable contrasts of these emulsions are well worth the trouble of fastening thin films into holders, the long exposure, and the special tri-oxymethylene developer.

To make a warm-tone slide with translucent shadows, pyro-ammonia (2) is excellent for soft results, and hydroquinone developer heavily re-

strained for more contrast. My trials are not exhaustive, but fine tones can be had with pyro, glycin, hydroquinone, and pyrocatechin, and restrainers include ammonium bromide, citric acid and potassium ferrocyanide.

Attention is given to lantern slides in old publications, and the formulae advised are very interesting. The English journals still publish occasional articles on lantern slides.

There is great variation in the different makes of lantern slides, process films, opaques, and the like. I strongly advise the worker to try several makes of each, for his own information.

- (1) In saying that no other method gives so fine an effect, no consideration is given the carbon process and dye-toning, which are unfamiliar to most American workers.
- (2) A suitable pyro-ammonia formula may be made up as follows:

A.	Pyro	48 grs.
	Sodium Sulphite, (dry)	192 grs.
	Citric acid	5 grs.
	Water to	16 ozs.
B.	Ammonium bromide	64 grs.
	Liquor ammonia (0.880)	48 grs.
	Water to	16 ozs.

To mix solution A dissolve the sulphite and citric acid in about 12 ounces of water, then add the pyro and bring the total bulk up to 16 ounces. For use take equal parts of A and B.

Practical Miniature Camera Photography

H. Crowell Pepper

Part IV: The Negative

(Continued from December issue.)

GRAIN. The introduction of the Miniature Camera and the need of large prints from tiny negatives has made photographers, generally, grain conscious. Every issue of every photographic magazine appears to be incomplete unless there is a discussion of grain. So much "bunk" has been written that many potential users of miniature cameras refuse to enter the ranks. One is led to believe the problem is insurmountable. If it were not for grain, you would have no pictures and the real problem lies in preventing clumping of the grains rather than in disposing of them or crushing them into a homogeneous mass. There was actually a newspaper article describing a process for ironing out the grains. Developing formulæ are

offered guaranteed to reduce grain and we have been afflicted with directions to develop to a definite "GAMMA", though we are never informed how to reach that gamma or to recognize it when we do reach it. If we poor amateurs were fortunate enough to possess an expensive and well equipped scientific laboratory our suffering in this direction might be alleviated. Again we are advised to double our normal exposure and shorten our developing time. Many and varied are the suggestions, all tending to convert our dreams of success into a nightmare of uncertainty and fear.

As stated above, the grains, which are an inherent part of our emulsions, are quite small (the largest probably not exceeding 8/1000ths of a millimeter), seemingly too small to worry about. If we had a single layer of grains upon the surface of our emulsions we probably would not have to bother ourselves about them. Such is not the case. There are a number of grains one above the other, since our emulsion has thickness. There may be six and more so related, depending upon the thickness of the emulsion. This fact, coupled with the affinity of the silver grains for each other, causes our worries. When you gazed upon some of the four feet by six feet enlargements made from negatives one by one and a half inches, you probably decided that the problem could be solved. It can, and I shall endeavor to explain how.

Briefly, the answer is: Use a fine grain emulsion, expose upon the full side, develop with a fine grain developer upon the short side, keep the solutions cool, temperatures even, and dry quickly. This is really not as complicated as it sounds and I shall try to make it clearer by an analytical discussion of each statement. The faster the film the larger the grains, as explained above. Consequently we begin by using a slower film if greatly enlarged prints are to be made. Up to 11" x 14" and at times 16" x 20" almost grainless enlargements may be made from superspeed films. Since nine out of ten prints do not exceed this size, why worry? The advice to double the exposure is based upon the SILVER GERM THEORY. Under this theory most of the silver bromide grains possess one or more germ centers. When light acts upon the grains these germ centers are in some manner vitalized. When a reducing agent (developer) acts upon these germs, silver (metallic) begins to deposit in the center of the germs and builds outwards—not uniformly. As development continues so does the growth of the deposit from each germ center and if development is continued long enough the deposit of metallic silver will exceed the size of the original crystal of silver bromide. If we give an excessive light exposure, more of these germ centers are affected and we may stop development before finality thus securing more grains of metallic silver than original grains of silver bromide—but smaller in size. This theory seems to be generally accepted. I find fault with the statement "Give twice the normal exposure" because as we shall see later (under Exposure) there may be two, three or more normal exposures depending upon the tone range of the subject and the negative tone range. In practice I expose upon the full side placing my subject tone range high upon the straight line of the H. & D. Curve. To illustrate: If the meter shows the tone range of the subject to be 1 to 30, there are four definite places upon the correct exposure line (H. & D. Curve — straight

line portion) where I may place my exposure and still correctly expose. The only difference will be that of density in my negative—the subject tones will still be proper. If 1/25th of a second is necessary to place the exposure near the toe of the curve, 1/10 of a second will place it higher, so I give the latter exposure. There is quite a distinction between this and the statement give twice normal exposure, for in the illustration used there are four normal exposures probably ranging from 1/50th to 1/5th of a second. If you gave twice the latter or say 1/2 second your negative would be badly overexposed. I hope this is clear; if not, our discussion of proper exposure will make it so.

Developers of high potential are never fine grain developers. They require strong alkalis to function and they work too hard. A low potential developer such as paraphenylene-diamine (base) requires no alkali and reduces slowly. The action of an M-Q (metol-hydroquinone) developer is rapid and the resulting metallic silver deposit has the appearance, under the microscope, of pieces of coke. The low potential developer mentioned gives flat metallic scales of silver. The bursting of the grain resulting from the action of a high potential developer also bursts the gelatine walls surrounding the grains of silver bromide and brings about a clumping of the silver grains. The resulting image instead of appearing as an evenly distributed mass of uniformly sized grains of metallic silver, shows up as clumps of unevenly distributed coke-like masses of silver with unevenly distributed interstices of gelatine. This clumping of the grains produces the graininess in our large prints. There is also the matter of refraction of the light in passing around these unevenly distributed clumps—a subject we need not now consider.

Our processing solutions should be kept cool and of even temperature. The purpose is to prevent too great a swelling of the gelatine in our emulsion with the consequent weakening of the walls between the grains. Weakened walls permit a clumping. Variations in temperature are conducive to reticulation. Quick drying is also important, preventing clumping. The longer the film takes in drying the greater the opportunity for the grains of metallic silver to clump through their affinity for each other. I recently read an article by a man well versed in the processing of miniature negatives and when asked (in the article) if drying had any effect, replied: "Not that I have noticed". In answer to this I shall confirm my statement to the contrary by mentioning a definite experiment. Four negatives were made of the same subject on four single films. Two were developed in a buffered borax M-Q formula and two in my favorite Paraphenylene-diamine-glycin formula. One from each developer was dried normally and the remaining two were dried in seven minutes in a drier. They were enlarged approximately 30x. The M-Q developed negatives were too grainy to use though the one dried rapidly was a great improvement upon the one dried normally. Of the remaining two, both were satisfactory though the one dried rapidly seemed almost grainless. I know rapid drying is a great advantage.

Selection of Film. So far in our discussion of emulsions we have been theoretical rather than practical and possibly many of my readers are more interested in hints upon what film to use, when and why. This may best be answered by the reader if he will propound several questions and find

answers for them. Before suggesting these I wish to state that most films offered for miniature camera work are excellent and will produce satisfactory negatives if you will follow the manufacturer's instructions and use your head in making a selection. Ask yourself (1) What subjects will I photograph? (2) What developer will I use? (3) How large will the final print be and on what paper surface?

The first question will necessitate several answers. If your subjects are outdoor subjects in Spring or Summer with little red coloring, a good orthochromatic film will prove satisfactory, whether a filter is used or not. If the subject contains much red, or the time of year is Fall or Winter, or you are seeking a full color rendering or working under artificial light, a panchromatic film should be used. Action shots at night under artificial light will require a superspeed panchromatic film as will theatre shots. When photographing under artificial light, and exposure time is not important, by all means select a slower panchromatic film. You should remember that, despite certain representations, no film (panchromatic) is as fast under artificial light as in daylight. Claims that certain "pan" films are faster under artificial light than daylight are false, since all films are excessively sensitive to blue and the artificial light is weak in blue and rich in red and yellow. Wherever possible use the slower speed emulsions since they are finer grained.

(a) Unless you are using a fine grain developer you must confine your film selection to the finer grained films and these are the slow films of either the "ortho" or "pan" types. Closely allied with this is the size of the prints to be made and the surface of the paper to be used. Where enlargements of great size are required the slower fine grained films are to be used and this is equally true where the prints are to be made upon glossy paper. A surfaced paper will show less grain than a smooth or glossy paper. There are occasions when we must compromise and use a fast film instead of a slower one, develop with an ordinary rather than a fine grain developer and make a large print when the negative should not be printed larger than 8"x10". Under such circumstances we simply grin and bear up. Since some superspeed films are inherently grainier than others, and some films are more contrasty than others that problem of selection must be solved by trial and error and without further comment from me. Whatever film you select from the many on the market do not condemn your selection until you have exhausted every effort to analyze and correct your failures. The faults will lie with you and seldom with the film.

(b) Color and its Monochromatic Rendering. We all realize that success in photographing a subject rests primarily upon the ability of the emulsion to truthfully render each color in a gray tone in its correct relation (visual) to other colors. That which many fail to realize is the inherent defects in emulsions to accomplish this without assistance. The spectrum is comprised of Ultra - violet, Violet, Blue, Blue - Green, Green, Yellow-Green, Orange-Red, Deep-Red and Infra-Red. The human eye is unable to see the first and last of these colors and the green, green-yellow and yellow appear brightest. Let us compare this with the luminosity of the spectrum as it appears to the ordinary (color-blind) emulsion. The bright-

ness band is shifted to the ultra-violet, violet and blue, falling off sharply in the blue-green while the remaining colors have no effect upon the emulsion. If the emulsion is orthochromatized we find there is still too much brightness in the violet and blue a falling off in the blue-green and green and an increase again in the yellow-green and orange then a sharp falling off in the darker orange and red, the latter color having no effect upon the emulsion. The effect upon the panchromatic emulsions varies somewhat with the type of dye used in manufacture. In the earlier types of "pan" emulsions we find a greater sensitiveness to violet and blue than in later types, termed Orthopanchromatic and Hyperpanchromatic. Most of the film offered for use with the miniature camera may be classed as Hyperpanchromatic. In this film the sensitivity to all colors is fairly uniform and the proper value is secured for each color, with the possible exception of a band in the green. This band is so narrow that its absence will not be noticeable. This discussion relates to the reaction of the various emulsions to the spectrum of daylight; the reactions to artificial light being quite different. While we cannot discuss the latter conditions at length we shall consider different phases as we progress.

From the above we gather that the emulsion makers have aided us materially in solving our color-into-monochrome problem. Unfortunately our emulsions are still too sensitive to ultra-violet, violet and blue and our next problem is to so reduce this sensitivity as to place these colors in their proper place-relationship to the other colors. This is done by means of Filters. Certain dyes possess the power to absorb some colors and transmit others. Advantage is taken of this and a transparent material, such as gelatine or glass, is treated with different dyes, placed in front of or behind the lens to absorb particular rays of colored light. We select a filter made with a certain dye known to absorb the ultra-violet, or violet and a portion of the blue, such a filter being generally designated as an orthochromatic filter. When we use panchromatic emulsion our problem is slightly different depending upon the type of panchromatic emulsion and the nature of the light source. The tendency today in the production of panchromatic emulsions is towards a constant increase in speed and this is generally obtained by an increase in red sensitivity. The increase in the orange and red is valuable since we are able to secure results without a filter as good as those secured upon orthochromatic emulsions using a filter increasing exposure four or five times. However we must bear in mind the possibility of over correction in the red when using a filter. To overcome this filters have been made of the "X" type (green) in two degrees of strength one for use outdoors and the other indoors. With the orthopanchromatic type of emulsions full correction may be obtained by using a filter similar to the "K2".

We often hear the expression "over-correction" used in the sense of improper correction. This is unfortunate as well as misleading. It depends entirely upon the results we desire. There are times when we really desire over-correction. To illustrate this I direct your attention to a problem recently submitted to me by a fellow amateur. He was asked to photograph a bed of Cannas. These were a beautiful red and the foliage a rich green. Since the purpose of this photograph was to show the flowers rather than the foliage, and since the luminosity of both colors was approximately the

same it became necessary to overcorrect for the flowers. The eye is able by reason of the color contrast to differentiate the flowers and the foliage but not so the photographic emulsion. The answer was the use of a filter which would materially brighten the red and both red and orange filters gave good results. Another and possibly more common subject wherein over-correction is necessary is a ripe corn or wheat field against a blue sky. Here the best results are obtained by using a contrast filter such as a "G" type which will increase the brightness of the field and darken the sky. On the other hand in the majority of subjects which we photograph we seek a rendering which, as nearly as possible, approximates the visual luminosities of the colors. In such case we must avoid the over-correcting filter, which will result in a print of false values, disappointing to the trained eye. In addition much of the atmospheric effect is lost. I feel that I cannot stress this point too strongly. I have had opportunities to view many Salons and I have been impressed with the number of prints false in most of their values. Their admission must have resulted by reason of their striking though false appearance. Many of these prints showed a sky entirely too dark with cotton-ball clouds overhanging the landscape or building. We do not see nature as depicted by these prints. There is atmosphere present at all times and this atmosphere places objects in their proper position and relationships. The blue sky is dark and the clouds are white (?) but the latter seldom have knife-sharp edges and even when they do appear so they like-wise appear to hold their proper place in the sky and not crowd down upon the earth. So be careful in the selection and use of your filter.

Now emulsions of different degrees of color-sensitivity require different filters. It is amusing to see an amateur equipped with one filter attempting to use it with ortho and pan emulsions of different manufacturers. It is possible, however, to find a general use filter since the majority of makes are made with the same dyes and possess the same absorption and transmission values. Unfortunately the difficulty in selecting such a filter lies in the lack of uniformity in designating filters. Some are named and others are numbered with a so-called times value e.g. 2x, 4x, 8x. This latter method is worse than the former which for general purposes is bad enough. What we really need is a printed statement with each filter showing the absorption curve and the transmission value or percentage of the particular filter. Then the film maker should give us a sensitivity curve of the emulsion with each box of film and we could fit the two together and get somewhere. Since this is not done we must do one of two things. We may use a filter test chart such as is furnished by the Eastman Kodak Company and visually approximate the type of filter we should use for a particular subject and try different makes of film until we secure a happy combination. The more scientific way to approach the problem is to purchase a book of the type of that issued by the same company under the name of "Wratten Filters" wherein the absorption of the various dyes is graphically shown. From this make our selection and adapt the filter to a particular film.

(To be continued.)

Cinema Section

Edited by

William A. Palmer

Brass Tacks On Industrials

H. B. Butler

Some Practical Suggestions on Making Industrial Motion Pictures

If you've made technically successful 16 m.m. movies you are qualified to make a certain worthwhile type of industrial movie in your usual 16 m. m. technique. The straight forward educational type which shows an industrial or manufacturing process, but does not call for the use of professional actors or synchronized sound. Applying sound principles and using common sense will do it for you.

Your commerical movie will differ from your personal movies mainly in two ways: first, an estimate of production cost will be all-important; second, your audience will give no quarter. The film has to be interesting, or else.

The first question you will be asked about an industrial picture is "How much will it cost?"

Here the fun begins. Asking that question offhand is like asking "How much will a house cost?" or "How long is a piece of string?" Accurate estimates of every step must be made before it can be answered. But even before these estimates can be made you must determine to whom the picture will be shown, and how. To the general public, or to people connected with the industry it portrays? As the main event of a program, or as a short, incidental item of entertainment?

Expensive movies have failed because they were not suited to the audience the manufacturer wished to reach. Know definitely how the finished picture is to be used, analyze your subject carefully, and "slant" the whole film to interest the audience for whom it is intended. No matter how small the cost, no film can be considered economical if it does not suit its purpose.

When you have determined the audience, you can start estimating your

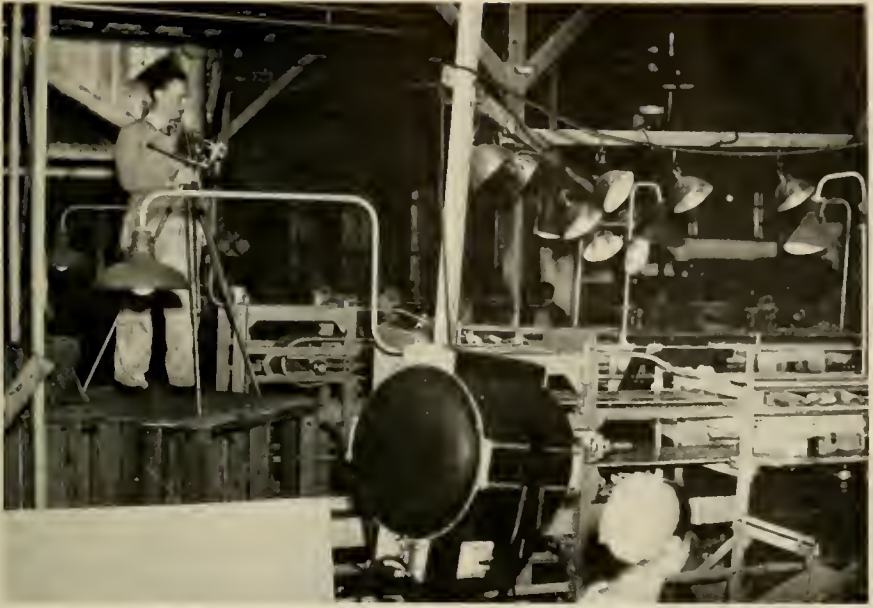


Fig. 1.

A high camera angle used to concentrate interest by eliminating distracting dark areas. Note the aluminum painted wall board in the lower left corner standing by ready to be used as a background.

costs. You must plan; lack of preparation is the royal road to lost time and money. To prevent omitting anything in working out your plans, look over the place where the movie will be shot. Then make a check list of all the items you should consider, take each item in turn, and elaborate on it.

Your list will include these main considerations: length of picture, sound or silent, sequence and script, camera angles, lighting, preparation of sets, the actual "shooting," editing and prints.

The length of the picture is determined by your audience. If the audience is specifically interested in the subject, and the picture is to be the main feature each time it is shown, it can afford to be longer and more detailed—about an hour or hour and a half's showing. If, however, from the point of the audience, the picture is merely of general interest and educational value, it should be shorter and less detailed—from ten to thirty-five minutes.

Whether the picture should be silent or sound materially affects the cost. Although you will not have the high costs of shooting synchronized sound, bear in mind that the addition of a sound track (or 'dubbed in' sound) involves not only the cost for narrator and recording, but also increased cost for lighting, extra film, editing, and final prints.

Costs for narrator and recording are more or less standard, and can be ascertained from almost any motion picture laboratory. Additional lighting for interior scenes is needed because of the shorter exposure at 24 frames per second, the speed at which sound pictures have to be taken. Sound speed also takes half again as much film as silent. Twice as much editing is needed to

handle the separate picture and sound films and to match the track to the picture. A duplicate picture negative sometimes is required for making the final prints, which themselves cost slightly more than silent prints.

If the picture is taken at the 16 frames per second, it is generally impractical to add sound later because the projection speed will be too fast for the action. On the other hand, if the picture is shot at 24, and later it is decided not to add sound, it always can be projected satisfactorily at 20 or 24 frames per second on a silent projector.

The picture sequence and script, (better known as the scenario) should definitely be written out before shooting a single foot of film. Many industrial pictures suffer from two main faults; they are either so long and so repetitious that they become boring, or so short and skimpy that they don't tell an intelligent story. Again analyze your audience and plan your picture.

Also, considerable waste motion and loss of film can result from lack of a written sequence and script. If, for instance, you are making a picture in a manufacturing plant, and you have your sequence fully written out, you can shoot different scenes in any order you find convenient, and judge how much film to shoot on each. Furthermore, your final picture will have a far better continuity or flow of action than a film shot without a written sequence. If you make a sound picture and don't write the lecture yourself, you will have to ascertain the cost of editorial work for having it written.

Camera angles are important in more ways than simply "good photography". They can be made to produce smooth continuity. They can help to produce definite effects which you may wish to obtain, such as size, cleanliness, efficiency, speed, thoroughness, care. And most important to the cost sheet, they can help you save money in lighting and preparation of sets.

For instance, a manufacturer might want his film to put across the impression of size and efficiency. Your first thought to show size, might be to make a shot of the whole interior of his plant. But how would you light it, and what would the lighting cost? Even if you could light it, all the mass of detail shown on the screen in this big scene, probably would not give the impression of size. Size can better be shown through camera angles which, for example would indicate long lines of machinery and mechanical massiveness, without actually showing the whole of one large machine or piece of equipment.

Camera angles, with the aid of good cutting or editing, also can be relied upon to show efficiency. For example, when taking a manufacturing process or assembly line in which an article moves through a series of different operations, photograph them in such a way that the movement is always in the same direction on the screen. Take two or three scenes of a long operation, and make each scene short. All action will then appear snappy and efficient. These and other careful considerations of camera angles make distinct savings in production costs. Be sure to write down all the camera angles on your sequence before starting to shoot.

The amount of lighting required will depend largely on camera angles and on how ambitious you are in your sets. Bear in mind that close ups and medium close ups are in general more interesting to your audience than long shots. Your audience likes to see not only what is happening, but *how* it is happening. However, the long shot and medium long shot are often necessary as



Figure 2. A shot being taken to give the impression of size and massiveness although the camera field does not include the whole of the three filter tanks shown. As lined up in the finder the center tank is shown and a portion of the two on either side. On the screen the impression of the scene is that there is a long line of tanks instead of just three.

establishing shots to show where the subsequent medium close up and close-up action is taking place, and to give it a relationship to what has gone before. For this purpose long shots and medium long shots, don't have to be nearly as all inclusive as they often are. It is generally sufficient to show for your long shot, all of one machine and only a suggestion of those on either side.

A long shot of this kind should not be hard or expensive to light, and in this connection there are two tricks which can save you a fortune in lighting bills. The first is to get the camera up high—twelve or fifteen feet above the floor and look down on the action. Obviously, this greatly narrows your field and makes it possible to confine your scenes to essentials, thereby greatly cutting down your lighting requirements. Scenes shot at eye level almost invariably show dark, out-of-focus backgrounds.

The second trick is to overcome the dark blurred background effect of scenes which have to be shot at eye level. To do this, obtain some large boards, (beaverboard, cheap five-ply, canvas, or anything else fairly smooth and large) and paint them an even light color. Aluminum is an ideal finish. Then simply use these boards as backdrops immediately behind the action you are photographing, taking care that the boards completely shut out the background and that no edges show. You can judge what considerable savings can be effected in lighting, by the use of light backgrounds of this nature. Not only do they cut down the total area it is necessary to light, but they also act as good reflectors and help in the general lighting of the scenes.

"Clamp-on" No. 1 or No. 2 photoflood units, on some form of metal or wooden stands, with cross members for overhead lighting, will serve you cheaply and well for 95 per cent of your lighting requirements. For the other five per cent you may need one or more spotlights, such as the popular 18 inch 2 kw. sunspots, or powerful floods when you are unable to get photofloods near enough to give you sufficient light.

The use of an accurate exposure meter is invaluable. In this connection, you will find it preferable to build up your light on each set to the same reading on your meter, so as to be able to shoot most of the scenes at the same lens opening. When this can be done, your final prints will look even and consistent.

Concerning preparation of sets, it is important that you get full cooperation from the people in the place where you are shooting, and that the sets are all ready before any photography begins.

How far in advance sets can be prepared will depend on the conditions in the plant or wherever the film is being made. At least you can tell a few hours ahead where you will next set up, and so far as possible everything should be ready by the time you start to set up your lights and camera.

Each set should be thoroughly clean, tidy, painted if necessary, new uniforms ready for the operators, all materials on hand. Floors should be evenly wet or dry, not splotchy with water. Paint should be new or at least even and not chipped.

If the cost of preparing the sets is to be charged against the picture, you will have to ascertain how much labor and materials can be afforded.

Check up on the source of light current for each set, so that you will have enough cable available, and know that the lines will stand the lighting load.

When planning the actual shooting you will need to consider every detail in advance because any oversight may seriously affect your cost estimates.

First of all see that insurance is taken out on yourself, and assistants, on the film and all equipment.

Before you start to work, gather together in one spot everything you are going to use. All your lighting equipment—globes, plugs and cable—backdrops, camera tripod, film, knife, pliers, adhesive tape, paint and brush, nails and hammer, wire, rope, strings, and so forth. Then decide where you will keep all this paraphernalia during the time you are shooting. In this way, after anything is used, it should be returned to headquarters. An ideal system is to obtain a large "flat truck" commonly used in industrial plants, and pile everything onto it, so that all the equipment can be easily wheeled from one set up to the next.

When setting up lights, and making final preparations on a set, you will often find need for an extra plug, pliers, some string, wire, or tape, so it is better to have these things handy than to have to stop while someone goes after whatever is missing.

If you do the photography and the directing, you will probably need one or more assistants to help you set up the lights and make final preparations on each set. It is better to direct the preparations on each set by first setting up the camera and then getting everything "set" within the field of the particular lens you are using, and it is easier to do this if you can stand by the camera and watch the preparations through the view finder. In this way you can tell

exactly where the backdrops should be put up, how close the lights can be set in, etc.

Although a good plan is to have a spraygun of paint precede you, so that each set can be gone over shortly before you are ready to shoot, it is also desirable to have paint handy so that at the last minute any necessary touching up can be done.

When you plan the details of the editing, you should decide how many prints are likely to be needed. If only one print is necessary, and the cost of replacing any one scene would not be too high, it may be satisfactory simply to edit the original reversal film and then use it as the print.

If, however, several prints are needed, it is advisable to make a duplicate reversal and use it for editing purposes. Then, from it, edit the original reversal, have the titles made and cut into the original, and make the required number of prints from the original, which not having been projected or touched, should insure the best possible quality in the prints.

If sound is to be added, the cutting print should be a duplicate reversal from the original reversal, and when this has been finally edited, and matched, and synchronized to the sound track, the original reversal should be matched to the cutting print, and any necessary titles cut into the original. Next a duplicate negative should be made from the edited original reversal and as this duplicate negative will also match the sound track, the final prints can be run off with a minimum of variation.

Like Einstein, you are now back to where you started—to the first question, "How much will it cost?" The answer lies in the analysis you have just made of all the cost factors connected with making the picture.

From your work sheets you can now show how much the minimum cost would be for a silent picture, and how much the minimum cost for a sound picture.

You can then recommend certain additional expenditures, which in your opinion would result in a better picture, either silent or sound.

A convenient way to show cost estimates is to set up four columns on the right hand side of your work sheets. Head the first left column minimum expenditures—silent; head the next column, recommended additional expenditures—silent; head the next minimum expenditures—sound, and the last column: recommended additional expenditures—sound.

Go through every item under each heading on your work sheets, and later in the cost column an estimate for everything which might entail a charge. Don't overlook any cost item however small it may be; even such expenses as lumber, car fares, express, transportation, rope, paint, labor for cleaning, etc. must be included.

If you do this thoroughly and carefully you will arrive at total estimates which will prove reasonably accurate.

When your figures are complete, it should not be hard to decide whether a picture can be made at all, even at a minimum cost; and, if one can be made, how much the appropriation should be.



"Chicago Sunset"

Fred G. Korth, Chicago, Ill.

Advanced Medal Print

■ This print contains fine picture material expertly photographed, and presents a most interesting problem in composition. Obviously the objects of greatest interest are the pathway of light on the water and the skyline, with the tallest tower acting as the center of interest. Observe, however, how annoyingly the silhouette of the boat at the left forces itself upon our attention. Any object so placed in this scene should certainly play a very subordinate part in the arrangement. In fact we could readily get along without any such object if the camera position could be adjusted so that the line of the wharf in the lower left would cut the far shore-line before running out of the print, thus eliminating what would otherwise be a weak spot in the composition under such circumstances. As things are the boat bulks much too large and its outlines are awkward and distracting. Trimming in from the left to reduce the bulk of the boat does not help. The minimum amount of trimming that will begin to have effect places sun and tower exactly in the center of the picture. If we trim more to avoid centering, the composition is thrown out of balance since all of the principle objects are then on the left of the picture space with nothing on the right to balance them. On the whole we think Mr. Korth has made the most of what is in this negative. The only real solution would be to make another shot at a time when this obnoxious boat had removed itself.

Data: 9 x 12 cm. hand camera; 1/100 sec. at F:16, on Agfa Super Plenachorme film pack; 7 P. M. in August. Print size 11" x 14".

Second Award
Advanced Class

■Occasionally we still hear the claim that a completely factual photographic rendering is not conducive to the bringing out of the pictorial qualities in a subject. It should hardly be necessary to point out at this late date that such a statement is meaningless unless it refers to specific subject matter. It is true for some subjects and utterly untrue for others. The present print provides an example of subject matter which absolutely demands a factual rendering. We should not overlook the fact that it is just such treatment that brings out the romantic qualities of this material. This, of course, because the story must be told by means of textures. If we follow the left edge of the shadow downward from the lock we notice that the shadow edge takes a sudden downward turn just before it leaves the print at the base. This little quirk in the shadow form, because of its position on the edge of the print, attracts too much attention to itself. Consequently the print is improved if we trim from the base until this quirk is eliminated. The picture could be made slightly more interesting in arrangement if the negative were turned during printing so that the bar of metal does not run so nearly parallel to the top and bottom of the print.

Data: Linhof Precisión Camera; Hugo Meyer Plasmat, F:4; 4 secs. at F:32 on Ilford S. G. Pan., in Glycin; no filter; E. K. Vitava, in D-72. Print size 7" x 9".



"Old Faithful"

Ralph Rex, St. Louis, Mo.



*"Les Mains D'elaine" Raymond B. Collard
San Francisco, Calif.*

Third Award
Advanced Class

■Technically this print leaves little to be desired. The arrangement is sound but not particularly exciting as a composition. We might question the advisability of showing the two cords in the upper left since these have a tendency to lead the eye out of the picture. Our feeling about this picture is that it should have been made to tell more of a story. That it should tell us more of the character behind the hands. This would be accomplished by posing the hands in a gesture less static and more suggestive. A pose which would be more clearly graceful, more delicate, more feminine seems to be called for since these are the qualities which we can see in these hands, but which have not been sufficiently emphasized in the making of the picture.

Data: Leica Model F; 90 mm. Elmar; ½ sec. at F:32, on Agfa S.S. Pan., in Champ-lin #7; two 500 W T-20 lamps; Agfa Brovira Glossy, medium, in Dassonville M. Q. 8 x 10" prints on 14 x 18" mounts may be ob-

tained at the price of \$5.00 upon application to Camera Craft. Prints will be exchanged with other prize winners in these competitions only.



*"Snow Dunes In Central Park" · Dr. Michael Wishengrad
New York, N.Y.*

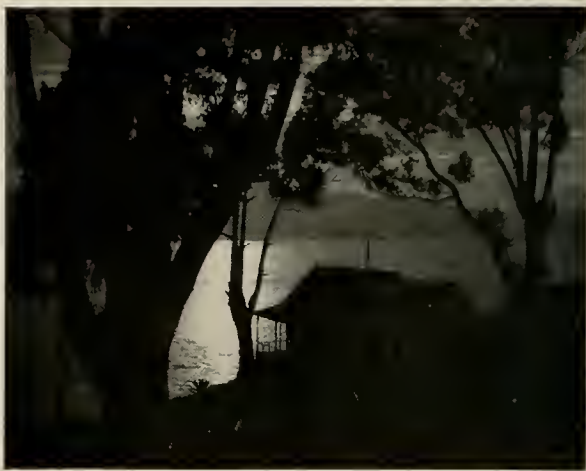
buildings in that area. As a consequence the eye is also attracted to this bright gap between the two buildings. Fortunately there is nothing in this area that contributes anything essential to the picture so there is no reason why we should not trim in from the left until we eliminate the little hump on the second building from the left. Try this and notice how much more strongly the desired movement through the picture space is established.

Data: Print size 11 x 14", blue toned.

Fifth Award

Advanced Class

■Observe the very interesting pattern of dark on light which Mr. Curtis has achieved in this picture. By that we simply mean that the size, shape and disposition of the tree forms are interesting and pleasing to the eye. There are no awkwardly shaped limbs, no lines which do not conform to the general movement of the picture, no glaring gaps in the pattern which catch and hold the attention. The balance between the amount of light and dark is nicely established. We see a great many pictures of trees in silhouette but surprisingly few of them are successful efforts. Most such pictures fail because of insufficient attention to the pattern set up by the tree forms. There are awkward lines or bad gaps in the structure which destroy the rhythm of the whole. If the photographer would study this pattern through a viewing glass before making the shot, most such defects would show up very clearly, and many of them could be corrected by slight shifting of the camera position. The pathway of light on the water appears a shade too bright, principally because it contrasts directly with the very dark tree trunks. This will hardly be evident in the reproduction, but it could be easily corrected by stopping the lens way down, removing the negative, and permitting a slight play of light over the area which needs to be printed a shade darker.



M. K. Curtis

Oakland, Calif.

Data: Print size 8 x 10".



"Steel Diver"

G. Raymond, Oklahoma City, Okla.

Amateur Medal Print

■The action is splendidly shown in this picture, and the subject matter is interesting indeed and somewhat unusual. In spite of the strong lighting both shadow and highlight detail have been well maintained, a quality that is seldom found in pictures made under such conditions. The area to the right of the upraised left arm is entirely superfluous, so the picture is improved by trimming in from the right until about one third of the thickness of that arm is eliminated. Observe that this trimming concentrates the attention more strongly on the action and prevents the eye from wandering over to this vacant area at the right. This picture is mounted so that the upper and left edges of the print are flush with the upper and left edges of the mount, although a margin of mount is left at the right and the base. We cannot caution our readers too strongly against any eccentricity in mounting. This is perhaps the one field of photographic endeavor in which all authorities are in substantial agreement. Even those whose experimental bent leads them most far afield in the making of their pictures, do not depart from the established basic principles of mounting. This because they realize that it is impossible to justify any such departure. Unless an innovation can be justified, as a means to an end, it becomes mere affectation, and is to be condemned. The mount must play an entirely passive part. Any eccentricity of mounting attracts attention to the mount, and consequently away from the picture, which is the exact reverse of what the relationship should be. Were this picture presented to a Salon Jury which must consider that the picture will be shown as submitted, it would certainly be turned down because of the mounting, in spite of the fact that the picture itself is a fine thing.

Data: Leica, 50 mm. F:2 Summar; 1/10th sec. at F:2 with illumination from a 6 KW welder's arc; E. K. Panatomic, in D-76; E. K. P. M. C. #11, in D-72. Print size 11 x 14".

Second Award
Amateur Class



"A Guild Window"
J. S. Garnett
San Francisco, Calif.

■As we look at this print we can almost feel the warmth of the sunlight as it streams through the window. This very lovely rendering of the play of light constitutes the principle appeal of the print and it is an appeal which calls forth an almost universal response. It is very interesting to observe how the stream of light seems to weld the multiplicity of small objects shown into a unified whole so that we are not bothered by any apparent over-elaboration of detail. We could almost go so far as to say that we look at the light itself, in viewing this picture, rather than the objects it reveals. It is certain that if this picture had been taken with an ordinary frontal lighting it would appear to contain a good deal too many objects. So we find that the play of light has transferred our attention from the detail to the atmospheric quality of the scene, and in so doing has made a very successful thing out of what would otherwise have been a badly cluttered still life.

Data: 8 x 10" Eastman #2 View Camera; 9½" Goerz Anastigmat; 25 secs. at U. S. 128, on Defender X.F. Pan.; developed for 16½ mins. at 65°F. in DK-76; contact print on Ronix K5 (a printing out paper), about 8 hrs. exposure to weak sunlight. 8 x 10" prints on 14 x 18" mounts may be obtained at the price of \$5.00 upon application to Camera Craft. Prints will be exchanged with other prize winners in these competitions only.

Third Award
Amateur Class

■This is quite a successful picture because it succeeds in bringing out that affectionate quality in dogs that is so attractive to all of us. We could wish for a bit more detail in the lower right and it appears that this could have been obtained through more exposure without blocking up the highlights. We cannot see the necessity for as much space as has been allowed on the right. All the strength of the picture is at the left. Consequently we prefer the print trimmed in from the right to the point where the line of the back of the head turns to the horizontal.



"Lorna"
David and Eleanor Craig
Washington, D.C.

Data: 3¼ x 4¼" R. B. Auto Graflex; 18 cm. Carl Zeiss 1c Tessar; 1/50 sec. at F:8 on Agfa Superpan, in Metol; K-1 filter, 6 P. M. in June; paper negative; print on E. K. Opal, in D-64; toned in Nelson Gold-toner. The picture has been reversed as regards left and right; print size 11 x 14". 11 x 14" prints on 16 x 20" mounts may be obtained at the price of \$10.00 upon application to Camera Craft.

Fourth Award

Amateur Class

■ This we consider a good portrait, natural in appearance and with the lines of expression in the face well recorded. We could wish for a little more light on the clothing so that some detail would be apparent and so that the contrast between clothing and face would not be quite so marked. Observe that the body appears rather bulky in relation to the head. This is caused by permitting the model to slump ever so little in assuming the sitting posture. When making head and shoulder portraits it is always necessary to have the model sit just a little more erectly than you wish the pose to appear in the finished print. Any slumping bulges out the clothing and as a result the body appears to bulk larger in the picture than it appeared to the eye.

Data: $3\frac{1}{4} \times 5\frac{1}{2}$ " Conley Camera; $\frac{1}{2}$ sec. at F:8, on E. K. Verichrome film pack.



"Ruined"

V. A. Hilarov
Evanston, Ill.

Fifth Award

Amateur Class



"Piccaninnies"

L. Charles Smith
Washington, D.C.

■ Here is a most entertaining picture. We like the subject matter and the way it has been handled. Here is a case where camera consciousness has been deliberately utilized to get a variety of amusing expressions. We do not object to the heads being crowded together. That is part of the theme of the picture, but it would be better if they did not all fall almost exactly on the same diagonal line. Imagine for instance if the head in the background had been raised so that all of the face showed. Not because we think it is necessary to see all of this face but because we would then begin to get a more pleasing arrangement of the heads. If we could then have had the second fellow from the left sitting on the ground rather than on the step, so that his head would be lowered, we would have something approaching an ideal arrangement.

Data: Leica F; 50 mm. Elmar; $\frac{1}{40}$ sec. at F:6.3, on DuPont Superior, in P-Diamine plus a second developing agent that we can't make out; Agfa Brovira Royal White, in N-103. Print size 11 x 14".

Monthly Competition

About Club Scoring

A situation arises this month which has occurred once or twice before, so it seems advisable to make our attitude clear to all. Mr. J. S. Garnett has won second prize in the Amateur Class with an 8 x 10" View Camera, and has directed that club credit be given to the Golden Gate Miniature Camera Club. Some Minicams have asked if it is proper to credit points to a miniature camera club when the picture is made with a large camera. So far as Camera Craft is concerned it will credit club points to any camera club to which a prize winner belongs. We think this is the only fair attitude to take. A miniature camera club does not require that its members use miniature cameras only, and the ordinary camera clubs do not object to their members winning prizes with prints made with a miniature camera. Consequently we consider that any restriction would be unfair to the miniature camera clubs, and will continue the policy stated above.

Scoring for Club Trophy Cups

The following won points for their clubs in the Advanced Class: Ralph Rex, for The Camera Clique; M. K. Curtis, for the East Bay Camera Club; Fred G. Korth, for the Fort Dearborn Camera Club; Raymond B. Collier, for the Photographic Society of San Francisco, and Dr. Michael Wishengrad for the Miniature Camera Club of New York.

The following won points for their clubs in the Amateur Class: G. Raymond, for the Oklahoma Camera Club; J. S. Garnett, for the Golden Gate Miniature Camera Club; David and Eleanor Craig, and L. Charles-Smith, for the Washington Pictorialists.

The following prize winner has no club affiliations: V. A. Hilarov.

Contributing Clubs

Amherst Camera Club (Mass.)	Miniature Camera Club of New York
Boulder Lens Club (Colo.)	Miniature Camera Club of Oakland (Calif.)
Camera Clique (St. Louis, Mo.)	Nassau County Camera Club (N. Y.)
Camera Club of Richmond (Va.)	Norfolk Photographic Club (Va.)
Camera Guild of Larchmont (N. Y.)	Nutmeg Camera Club (Manchester, Conn.)
East Bay Camera Club (Oakland, Calif.)	Oklahoma Camera Club
Fort Dearborn Camera Club	Pack Rats (Pasadena, Calif.)
Golden Gate Miniature Camera Club (San Francisco.)	Palo Alto Camera Club (Calif.)
Kamera Kranks Klub (Durham, Calif.)	Photographic Society of San Francisco
Knoxville Camera Club (Tenn.)	Photo Pictorialists of Springfield (Mass.)
Long Beach Camera Club (Calif.)	Washington Pictorialists (D. C.)

Standing of Clubs

Large Clubs Advanced Class		Large Clubs Amateur Class	
Fort Dearborn Camera Club.....	5	Golden Gate Miniature Camera Club.....	4
Photographic Society of San Francisco..	3		
Miniature Camera Club of New York.....	2		
Small Clubs Advanced Class		Small Clubs Amateur Class	
The Camera Clique.....	4	Oklahoma Camera Club.....	5
East Bay Camera Club.....	1	Washington Pictorialists.....	4

THE CAMERA CRAFT MONTHLY COMPETITIONS—EXPLAINED

It is well to understand at the start that the rules governing these competitions are purposely kept at a minimum, so that the competitions may be open to all without red tape and without complication. A competitor may take whatever action he desires that is not specifically denied by the rules. **Camera Craft** makes no copyright claim to

the pictures which win awards, and their makers are entirely free to do with them as they wish. Do not bother to wonder if you may do this or that. You have complete liberty of action, provided only that you observe the few simple rules given below.

Prize Winners Widely Exhibited

The winning prints in these competitions are made up into Traveling Salons and circulated for exhibition and study to Camera Clubs throughout this country and Canada. To date 116 clubs have requested these shows so we feel entirely safe in saying that these pictures receive a wider exhibition than is possible by any other means.

Objects

- To promote the cause of pictorial photography in general.
- To provide our readers with a disinterested means of having their pictures evaluated in comparison with others.
- To provide a department in which ten pictures of merit may be shown, discussed, and analyzed each month.
- To provide an "open forum" for the discussion of these prints by printing communications from readers.
- To make this department instructive and helpful for all by the above means and by printing the technical data on each print.

Rules

- Any one may enter. You are **not** required to be a member of a camera club, a subscriber to **Camera Craft**, or anything else. No entry fees. No entry blanks. No restrictions on size, or number. Mounts are not required.
- There are two classes, "Advanced" and "Amateur." These groups are judged separately, with five awards in each class, ten awards in all. The ten winning prints are published in **Camera Craft** each month.
- Prints must have makers name and address, the class in which they are to be entered (whether "Advanced" or "Amateur") and the technical data (see below) regarding them, plainly marked on the back of each.
- Prints shall be returned only when stamps sufficient to cover are enclosed with the pictures. Do not send stamps under separate cover as it is possible they may not be connected with the identity of the sender or prints.
- Prints may be in black or sepia but tinted and painted photographs are barred.
- Prints must be in before the 4th of each month to be entered in the succeeding month's competition.
- Prints winning prizes cannot be returned.
- The object of the two classes, Advanced and Amateur, is to insure that individuals shall compete on as even terms as possible. Compare your prints with those shown as prize winners in the two classes, and decide with which group your pictures would most fairly compete. If in doubt enter first in the amateur class and then if successful move up to the advanced. In order to insure fairness and an equal chance to all, the judges reserve the right to move prints into the advanced class if the quality of the pictures seem to justify this.

Awards—Advanced Competition

- First: Silver Medal.
- Second: Photographic Merchandise, value \$5.00.
- Third: Two years' subscription to **Camera Craft**.*
- Fourth: Eighteen months' subscription to **Camera Craft**.*
- Fifth: One year's subscription to **Camera Craft**.*

Awards—Amateur Competition

- First: Bronze Medal.
- Second: Photographic Merchandise, value of \$3.00.
- Third: Eighteen months' subscription to **Camera Craft**.*
- Fourth: One year's subscription to **Camera Craft**.*
- Fifth: Six months' subscription to **Camera Craft**.*

* May be presented to a friend or divided and presented to friends at this or holiday time.

Technical Data

We request that the technical data be placed on the back of each print submitted to the competition. A complete technical description should cover the following points: Size and make of camera, make and focal length of lens; exposure time and aperture used; negative material; negative developer; filter; light source; (if artificial, the number of lights and the wattage, if outdoors, the time of day and the month); paper; print developer; special treatment. By "special treatment" we mean, any manipulation or procedure that is not covered by the above.

Exchange Feature of the Competitions

If a contributor desires to exchange his prints with other prize winners in the competitions he should mark on the back of his prints the words, "Will Exchange." His willingness to exchange will then be stated in **Camera Craft** along with the tech-

nical data which accompanies each prize winning picture. It must be understood that only those who have won prizes in these competitions are eligible for exchanges, and that only pictures which have appeared as prize winners in these competitions may be offered in exchange. Unless the phrase "prints will be exchanged with other prize winners in these competitions only" appears at the end of the technical data the maker of the picture is not willing to exchange, and consequently exchanges for that picture cannot be arranged. If you have won a prize and wish to make an exchange write to **Camera Craft** stating the print you wish to receive and the picture you are offering in return. **Camera Craft** will see that the request is forwarded and send the necessary addresses to both parties. It should be clearly understood that even though an individual has stated his desire to exchange he is not obligated to accept any particular exchange unless the picture offered is one he would like to own.

Selling Price For Prints May be Stated

Many a photographer is happy to sell an occasional print, not only because of the monetary return, but because it is pleasant to know that one's work is appreciated by others. **Camera Craft** will assist in this regard by printing a selling price along with the technical data which accompanies each of the prize winning prints when reproduced in the magazine, and when they are sent out as Traveling Salons. If you are willing to sell prints for private collections please state price, print size and mount size on the back of each print. If the sale of prints does not interest you please state "not for sale." No commission will be taken by **Camera Craft**.

Club Trophy Features of the Competitions

Four Silver Trophy Cups will be awarded to clubs making the best record in the **Camera Craft** Monthly Competitions each year. Awards will be made on the following basis:

1. Clubs will be divided into two groups—large and small on the basis of membership, and identical awards will be made to each of the two groups. This is to make sure that competing clubs will be of approximately the same size. Large clubs will be those whose membership is over 40. Small clubs are those with membership of 40 or less.
2. The four awards are as follows:
 - (a) To Large Club making highest total score in the Advanced Class.
 - (b) To Large Club making highest total score in the Amateur Class.
 - (c) To Small Club making highest total score in the Advanced Class.
 - (d) To Small Club making highest total score in the Amateur Class.
3. Points in each of the four divisions, Large and Small Clubs, Advanced and Amateur Classes are as follows:

5 points for First Award, 4 points for Second Award, 3 points for Third Award, 2 points for Fourth Award, 1 point for Fifth Award.
4. Each club has the opportunity of competing for two cups. One in the Advanced Class and one in the Amateur, but individuals within the club cannot enter in both classes. Individuals may choose the class in which they wish to compete, but the judges reserve the right to change entries from the Amateur to the Advanced class if the quality of the work seems to warrant it.
5. No individual may earn more than 15 points for his club.
6. It is well to understand that the conduct of this competition is in nowise changed by the addition of these annual club awards. Judging is still entirely on the basis of the individual print, and those who are not club members have the same chance of winning awards as formerly. The only difference is that now if a prize winner is a member of a club, his club will be credited with the proper number of points allocated for that prize.
7. Scoring for these cups begins with the January Competition, prints for which must reach this office on or before Dec. 4. It runs for 12 months concluding with the December competition. Prints for each succeeding competition must reach this office on or before the 4th of the preceding month.
8. Club name, makers name and address, and technical description of print must appear on the back of each picture.

What a Club Should Do

- Study the rules which appear on this page and the rules governing the competition in general which appear above. ■ Appoint a committee of one or two whose sole duty will be to collect and forward prints **each month and on time.**
- Divide your membership into two groups, one to compete in the Advanced Class, the other in the Amateur. It is not required that a club compete in both classes.
- Be sure and send each month as it is the total score that wins. Let's go!

Club Notes

San Franciscans Please Note

From time to time Mr. William Mortensen has been urged to come to San Francisco and give his course in photography here so that those who are unable to travel to Laguna Beach might have an opportunity to study with him. At present he is considering doing this in either February or March of 1937 and he would like to hear from all who would be interested in the courses, since that information will be of great help to him in reaching a decision. The Mortensen course may be taken in from two weeks to a month depending upon how much time the student has to devote himself to the practise work that is assigned between each session and upon how rapidly the student can master the various parts of the course. After completion of the course the student is expected to submit work for criticism for a period of three months. If this idea materializes a student may meet with Mr. Mortensen in either the morning, afternoon or evening, probably at the studio or laboratories of the California Camera Club, San Francisco. Each meeting will require at least two hours. Tuition for the complete course is \$125.00. All interested should promptly write to William Mortensen, Laguna Beach, Calif., or to the office of this magazine. As an interesting sidelight, it has been suggested to Mr. Mortensen, that he hold a photographic competition while in San Francisco, and judge and discuss the pictures submitted publicly at a meeting which would be open to all. The prize for the best picture would be a free scholarship to the Mortensen course of instruction. These should be understood to be tentative plans. Camera Craft will report promptly if they are to become a reality.

Interesting Bulletin

The Photographic Society of America has just issued a most interesting bulletin which describes in much greater detail than has been possible in magazines such as this the plans and procedures for their Four Print Exhibition Plan. Even though you may not intend to register to take part

in this experiment the bulletin makes very interesting reading, so we advise you to write Dr. David R. Craig, 1410 34th St., N. W., Washington, D. C., for a copy.

"Andy's Courses"

The University of California Extension Division announces four courses in photography which will be given under the instruction of the ever popular Mr. P. Douglas Anderson, F.R.P.S. Classes will be held in the Extension Divisions building in San Francisco and Oakland. They are as follows:

Photography: Principles and Practice (Advanced), opening in San Francisco Tuesday, January 12, at 7 P. M. and in Oakland, Wednesday, January 13, 7 P. M.; Photography: Darkroom Technique, opening in San Francisco, Monday, January 11, 7 P. M.; Photography: Miniature Cameras, opening in San Francisco, Thursday, January 14, 7 P. M. and in Oakland, Friday, January 15, 7 P. M.; School Photography, opening in San Francisco, Thursday, January 28, 4 P. M. and in Oakland Wednesday, January 13, 4 P. M.

Second International Leica Exhibit in San Francisco

This important and very interesting exhibition was brought to San Francisco by Spindler and Sauppe, west coast distributors of the Leica Camera, and displayed at the St. Francis Hotel, closing December 17th.

Camera Craft apologizes to its local readers for failing to report this exhibition in advance of the event. This was due entirely to an oversight on the part of the Editor who assures you that he feels properly chastized.

This second exhibition includes a greater variety of subject matter than the previous one, and certainly makes a strong argument for the claim that there is nothing which the Leica camera can not do and do well. There are portraits, landscapes, sports shots galore, much fine candid camera work, some splendid scientific subjects and much more. As was to be expected the three Europeans, Dr. Paul

Wolff, Alfred Person, and A. F. Baumann, remain the outstanding Minicams of the world. Their large prints show a perfection of execution and a breadth of conception that leaves little to be desired. We were particularly impressed by a large head done by Mr. Person which ranks among the finest portraits we have seen. At present we are trying to arrange to reproduce this on the cover of our next issue.

On display also were a large number of color prints made by the Chromatone and Wash-Off Relief processes, from color separation negatives taken from Kodachrome originals. They certainly prove that this combination of processes offer a practical means for producing natural color prints. Also shown was the apparatus for the making of color separation negatives from Kodachrome. This has been developed by the Thomas S. Curtis Laboratories, of Huntington Beach, Calif.

Added to the regular exhibit were several groups of prints from local workers, among which were a fine group of candid camera shots of the San Francisco Opera, by Raymond B. Collier. We hope you saw the show.

At the De Young Museum

Currently on exhibition at the M. H. DeYoung Memorial Museum, Golden Gate Park, San Francisco, is the Invitational Exhibition of Foreign Pictorial Photography. This fine show consists of about 160 prints, all from foreign pictorial photogra-

phers. The show was assembled and is being circulated by the Photographic Society of America, and was brought to San Francisco through the cooperation of the Photographic Society of San Francisco, and the DeYoung Museum. Those who were invited to contribute to this Salon were carefully selected by a committee of the Photographic Society of America, so that it is safe to say that the exhibition is truly representative of the finest European work. It will remain at the DeYoung Museum through January 10, 1937.

The London Salon Coming to New York

The young and extremely energetic Oval Table Society, Inc. of New York City is doing really big things for photography. They have only just finished staging their very successful National Salon, and now announce that arrangements have been completed to hang The London Salon at the British Empire Exhibition in New York City, opening January 6th. This show, which is recognized as being one of the most important photographic exhibitions the world over, has never before been seen in this country. The news certainly makes us wish we could be in New York at that time.

The same society is planning to hold their first International Salon November 15th to November 30th, 1937. Full details concerning this exhibition will be given in an early issue.

Notes and Comments

About Speedguns

What is the sign of a **press** photographer? It used to be a police card stuck in a hat band and baggy pants, but what with so many non-press photographers using candid equipment working photo journalists now agree that the Mendelsohn Speedgun is the foremost badge of authenticity, so widely and so universally has it become regulation press equipment.

In a group of press photographers gathered at the Press Photographers' Show at Radio City an International News Man

said he no longer bothered to show police officers his "press" card. His Speedgun, he said, got him through fire lines and riot boundaries winning for him more respect than he ever obtained from his regular police card. An Associated Press photographer said that in Washington statesmen and politicians alike become docile at the first appearance of a Speedgun—have become so automatic at this that the mere presence of a Speedgun in a room causes them to go on good behavior for the constituents' benefit. In Hollywood, said a

returned free lance, the property directors have learned their "newspaper men" cannot be made to look real unless they have Speedguns on their cameras. A recent Saturday Evening Post front cover bore out this reputation of the Speedgun when it showed what appeared to be newspaper men in a group equipped with a motley assortment of cameras and Speedguns.

S. Mendelsohn, manufacturer of the Speedgun, sends us the above bit of information and states that the second printing of "Speedgun Photography", the 12-page booklet, is now available for free distribution to readers of Camera Craft by writing to 202 E. 44th St., New York City, N. Y.

Bargains—Bargains—Bargains

We learn that Burke & James, Inc., 223 W. Madison Ave., Chicago, Ill., are just completing their 39th Inventory Sale Bulletin. Says Mr. Drucker, head of the firm: "There are twice as many offerings as in any previous bulletin we have ever issued and prices have been cut to the bone." Write for your free copy today.

About Backgrounds

If you are in need of backgrounds of any kind get in touch with S. Harrison, 375 Fifth Ave., New York, N. Y. This firm supplies Print-in Backgrounds in a wide variety of artistic hand drawn designs, and will also furnish actual backgrounds in felt or window shade material in a variety of shades. The firm has prepared a very interesting pamphlet which fully describes and illustrates what they have to offer. Write for your free copy today.

Owners of New "Christmas Cameras" Advised on Exposure

The record sale of high-grade cameras for Christmas gifts this year will undoubtedly widen the group expecting to lift their photographic work out of the "hit-or-miss" class. In this situation, a word of warning to novices who expect their new cameras immediately to outperform more lowly equipment of the "box" type seems desirable.

To new owners of high-speed minicams, equipped with f2 or even f1.5 lenses and speeds ranging to 1/1000 of a second, serious initial disappointment often results from confusion due to the wider range of choice of aperture and shutter speeds, and

the tendency to try for shots under difficult lighting conditions by exposure guesswork. In the movie field, a similar tendency to jump in "where angels fear to tread" and attempt color work under a wide range of unfamiliar conditions is also cited.

Among experienced users of cameras equipped for a wide range of speeds and light conditions, the necessity for determining proper exposure independent of eye judgment is accepted as the only sure way to take full advantage of modern camera and film possibilities. Obviously, for new owners the need is even greater.

Use of a reliable exposure meter of the photo-electric type such as the Weston has frequently been found to restore the faith and enthusiasm of the new owner of a high-grade camera disillusioned by his inability to "guess" exposures. See this most valuable or photographic accessories at your dealer's or write directly to Weston Electrical Instrument Corp., 617 Frelinghuysen Ave., Newark, N. J.

A Chance for Gadget Makers

The Galleon Press, 175 Fifth Ave., New York, N. Y., are looking for acceptable diagrams and photographs of photographic accessories which have proved helpful in use. Brief explanatory text should accompany each idea submitted. The firm will pay up to \$10.00 for each contribution which is accepted. Stamps must be enclosed for the return of unacceptable material.

Sensational Result from Ad

Since advertising Super X film in bulk for 2½ cents a foot in the November Camera Craft, the Morgan Camera Shop, 6305 Sunset Blvd., Hollywood, California, has sold over 4,000 feet of film, all in orders directly traceable to the one advertisement. In addition, a large number of Camera Craft readers wrote for a free copy of the shop's monthly publication mentioned in the ad, without ordering film. Those not yet on the Morgan mailing list should send their names in promptly for this monthly publication contains much useful information for the Minicam.

Glims

Out of a brand new research organization in New York comes the first of a series of unique photographic accessories

known as Glims. Glims are sheets of paper coated with a luminous compound which gives off a persistent green light. This light has been found to be ideally suited for the inspection of panchromatic emulsions, even the very rapid hypersensitive coatings now in use. A Glim sheet, (patent applied for), also has a gum backing so that various other services can be rendered. For example, one can make for himself an excellent dark room timer simply by cutting out twelve tiny Glim pieces and pasting them over clock numerals. Another use for Glims is in prefogging. By putting a piece of Glim inside a lens cap one has the means for increasing the speed of his film without having to resort to shots against the sky, against blank walls, etc. Glims are sold in standard sizes of 4x5, 5x7 and 8x10 inches by leading photographic dealers. Dealers carrying Glims in stock have test strips for free distribution, or readers can obtain test strips by sending 6 cents in stamps to Photo Research, Inc., 202 East 44th St., New York, N. Y.

Zeiss Ikon Exhibitions

Zeiss Ikon Photographic Exhibitions, which have been such a success during the past several years in a number of our large cities, will again be held during the same months in 1937. The high quality and the great variety of pictures shown last year made by numerous photographers from all parts of the United States is well remembered by amateur as well as professional photographers. The Zeiss Ikon Exhibitions will again present a selection of technically and pictorially perfect photographs and enlargements made with Contax, Super Ikonta and other cameras of the Zeiss Ikon line.

So far the following dates are fixed:

New York, at the large demonstration room of Carl Zeiss Inc., 485 Fifth Avenue, from February 8th to 13th.

Philadelphia, Pa., at the Bellevue Stratford Hotel, Junior Room, from February 18th to 20th.

Boston, Mass., at the Parker House Hotel, Hawthorne Room, from February 25th to 27th.

Pittsburgh, Pa., at the Hotel William Penn, Blue Room, from March 4th to 6th.

Chicago, Ill., at the Palmer House Hotel,

Dining Room No. 14, from March 15th to 20th.

Detroit, Mich., at the Hotel Book-Cadillac, Washington Room, from March 25th to 27th.

Cleveland, Ohio, at the Statler Hotel, Lattice Room, from April 1st to 3rd.

Contributions of pictures may be sent to and further information may be had from Carl Zeiss Inc., 485 Fifth Avenue, New York City.

The Robot Camera

The last word in miniature cameras has just been introduced to the United States. It is the Robot camera. Figuratively, this camera has a built in "brain" since it dispenses with so many motions and meditations formerly thought essential for the operation of a camera. For example, the Zone Focussing feature dispenses entirely with the need for range finders or distance scales. Wind the motor once and you take care of the next twenty-four exposures. Press the button once and you not only expose the film, but you also release the pressure plate, advance the film one frame, reset a metal shutter, thus making double exposures impossible and allowing you the very important feature of making "sequence" or "magic eye" pictures—the kind where, step by step, one sees a man jumping over a hurdle, a tower collapsing, etc. A further example of automatism is the ingenious arrangement for using filters. The filter holder is behind the lens and controlled by a lever from the outside. When it is desired to use the filter throwing the filter switch also automatically slows up the shutter speed to compensate for the density of the filter. In the Robot, too, a feature is the practically indestructible character of its construction. All metal and rustproof it is probably the first camera ever to offer ruggedness along with precision manufacture. To learn more about the Robot see the advertising pages of this magazine; call at the leading photo shop in your town or write to the Intercontinental Marketing Corp., 10 East 40th St., New York City, for literature.

Merton E. Grush Dies

Camera Craft extends its sincere sympathy to the many friends and associates of Mr. Merton E. Grush, president of the

C. P. Goerz American Optical Company, who passed away at his home in Winchester, Mass., December 1, 1936. Mr. Grush has been president of the company since its purchase by a group of American citizens many years ago.

New Importations

Hans Unfried, 20 Camp St., Buffalo, N. Y., takes his place as a new importer of important photographic apparatus. His motion picture items will be discussed in an early issue, but we wish to call attention to two other very practical items in his line. The new Direct Auto Release is surprisingly simple and reliable in operation. All one needs to do is to screw the device into the shutter release socket, set it for the desired exposure and step into position to either take his own picture or include himself in a group shot.

The Exakt Enlarger has a number of new and useful features most important of which are a device for accurate focussing without strain to the eyes, and the opportunity to use interchangeable lenses on the enlarger. For focussing all one need do is to set the enlarging scale and the focussing scale to the same figure, and sharpest focus results. Mr. Unfried has prepared pamphlets on both these items which give full details and tell much more than we have space for here. Write for them today.

New Rolleicord and Linhof Features

Burleigh Brooks announces a new Rolleicord camera in the 6x6cm. ($2\frac{1}{4} \times 2\frac{1}{4}$ ") size, a camera possessing some very unique and desirable features. This model is now equipped with either a Zeiss Triotar f/4.5 or f/3.5 lens and has a high-speed (f/3.2) focussing finder lens. Additional refinements include a Depth of Focus scale, eye-level observation of ground glass image and automatic film transport.

Amateurs who appreciate the precision and versatility of the Linhof Camera, will be glad to know of a new Linhof Camera—Model 34.

In addition to its many refinements such as drop bed, triple extension, mechanically controlled rising, falling and lateral movements, tilting front, revolving back and detachable lens board, this new model has a 4-way leveling or swing back and a raising bed. The swing back is actuated by means of 4 screws at the end of camera

enabling one to adjust the instrument at all angles. For further information, write Burleigh Brooks, 127 West 42 Street, New York.

Central Issues New January Clearance Sale Book

The Central Camera Company, 230 South Wabash Avenue, Chicago, Illinois, announces publication of their new 1937 January Clearance Sale Book, featuring special clearance prices on moving picture and still cameras, lenses, films and supplies of all kinds.

This issue should be of especial importance to all amateur and professional photographers interested in enlarging because of the special feature article written by Franklin I. Jordan, author of the famous book "Photographic Enlarging". This article by Mr. Jordan is of absorbing interest as is the complete line of enlarging equipment and supplies incorporated in this Special Enlarging Number of Central's January Clearance Sale Book.

Readers of this magazine may secure a free complimentary copy by sending name and address to the Central Camera Company, 230 South Wabash Avenue, Chicago, Illinois. Please be sure to mention this magazine.

Mazda Projection Lamp Price Reductions

Further price reductions on several Mazda projection lamps used in portable motion picture projectors have been announced by the General Electric Company's Incandescent Lamp Department, Nela Park, Cleveland, Ohio. The new prices average fully 10 per cent below previous prices for these lamps and 25 per cent below their prices when they were first introduced.

These reductions are said to have been made possible by the concentration of demand on fewer types of lamps.

The lamps and classes of service affected include the following: the standard-voltage 100-watt and 200-watt T-8 bulb lamps with bayonet base, for 8-mm. and slide-film projectors; the standard-voltage 400-watt and 500-watt T-10 bulb and 750-watt T-12 bulb biplane-filament lamps with medium base, for 16-mm. projectors; and the standard-voltage 1000-watt short T-20 bulb biplane-filament lamp with medium base, for 35-mm. projectors.

•• Classified Advertisements ••

OUTFITS FOR SALE

◆4x5 Speed Graphic Camera, almost new, F:6.3 Zeiss K lens, compound shutter, new Mendelsohn Speed Gun, focussing back, 3 holders, F.P.A., worth \$150.00 sell for \$95.00. H. M., c/o Camera Craft, 425 Bush St., San Francisco, Calif.

◆Leica F:3.5 lens with case and range finder, complete, excellent condition. Also post card size Graflex with Carl Zeiss F:4.5 lens 1 C Tessar 18cm. Either Camera for \$38.40. Russell Myer, 111 S. Jefferson Ave., Saginaw, Mich.

◆Latest Kodak Duo 6-20, F:3.5, Compur Rapid, filter, case, accessories, \$44.50. Bewi Senior exposure meter \$5.00. Kodak Film Tank \$3.50. Dr. John Haruff, Hollister, Calif.

◆Kawee 9x12cm., Zeiss 1:4.5 f, 13.5 cm.; pack adapter, 6 plate holders; Speed-gun Junior flash synchronizer; Kodak developing tank; Gracophot exposure meter and range finder.....\$55.00
Leica D, Elmar 1:3.5 f, 5cm., with leather case, \$75.00. Earl Gilbert, Box 4615, Duke Station, Durham, North Carolina.

POSITIONS WANTED

◆Wanted position by an all around photographer and kodak finisher. Will start for a reasonable salary, 17 years experience. Homer S. Wyatt, 1143 S. Catalina St., Los Angeles, Calif. Phone, Fitzroy 3073.

WANTED Winter Scenes. I am in the market to purchase original photographs of winter scenes suitable for greeting cards. Any rejected prints will be promptly returned and those accepted immediately paid for. If possible submit samples on glossy paper. C. S. LaClair, 5647 Pillsbury, Minneapolis, Minnesota.

Kodak Pupil F2 lens, \$45.00, 4x5 Speed Graphic, Zeiss Tessar F4.5, \$75.00, 2 1/4x3 1/4 R.8. Reflex F4.5 lens, \$42.00, 135MM Elmar F4.5 Leica Lens, \$60.00, Leica F Elmar F3.5 lens like new, \$123.50, Leica G Chrome Summar F2 like new \$155.00. Free 16MM Film Library Catalogue, Bargaingram full real buys—Trades accepted, bought. MOGULL'S, 1944-C Boston Road, N.Y.

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◆MOTION PICTURE CAMERA—DeVry, 35mm. F:3.5 lens, leather case, tripod, projector. Al condition, cost \$450.00. Trade. What have you? E. R. Millis, M. D., 1207 Grand Ave., Kansas City, Mo.

OUTFITS WANTED

◆9x12 Linhof, Silar, or similar outfit. Must be in good condition. H. L. Dean, 5 East Fairchild St., Iowa City, Iowa.

STUDIOS WANTED

◆PARTNER WANTED—A man of business executive ability to handle nationally known mail order school teaching art work with photography. Attractive opportunity for the right party with \$5000.00 or more. Confidential. Address: P. O. Box 1011, Los Angeles, Calif.

◆WANTED—Photo Studio or Camera Shop, preferably in Washington or Oregon. Give price and full particulars. S. H. N., c/o Camera Craft, 425 Bush St., San Francisco, Calif.

INVENTORY SALE: Cine Nizo 8, F:2.8 model SO—\$38.00; model E—F:2.8, \$52.00; model E with Leitz Hektor F:1.5—\$130.00; Paillard Projector for 8 & 16 mm, only \$225.00.

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"Portrait"

Alfred Person

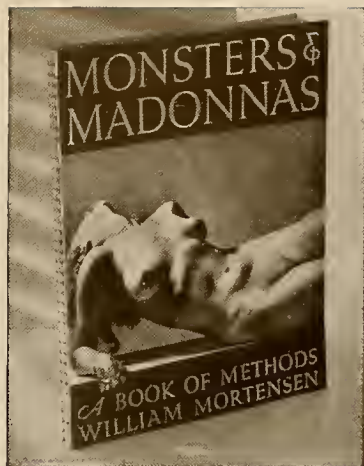
2nd Leica International Salon
(See Notes and Comments)

January 1937

THE LOS ANGELES SALON
COLOR PHOTOGRAPHY
EDITORIAL PAPER NEGATIVES
OUR SCREENINGS

PRICE 25c

James N. Doolittle
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Cinema Section



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The Critics Said

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" . . . The eminent pictorialist of the West has here presented a one-man show that will delight his followers, not only in the fine presentations of his art, but in the daring and caustic comment that precedes and accompanies them." *The Camera.*

" . . . The development of each idea is completely outlined; the mechanics of it only incidentally, but nevertheless with a satisfying regard for detail interesting to the photographer, amateur or professional. . . . In short, if this editorial opinion has any value, "Monsters and Madonnas" is worth more than the \$4.00 you'll have to pay for it.

Defender Trade Bulletin.

" . . . This is probably the best book Mr. Mortensen has written and consists of full page reproductions of his works together with a detailed account of the methods employed, and of the sources from which the ideas for some of his most ambitious attempts were gleaned. . . . The book is undoubtedly one that will be read with enjoyment not only by photographers but on account of the author's interesting views on a variety of topics, by others."

The Gallery

" . . . This is one of the most absorbingly interesting works on photography, and at the same time one of the most instructive, that we have read in many a day. . . . It is not a book for the run-of-mine worker who is perfectly satisfied with what he is producing, but to any photographer who wants to lift himself from mediocrity and to watch on the printed page, an artist's mind at work, we would consider it "required reading." It is amply worth the price."

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"Oyster Boats—Annapolis"

20th Los Angeles International Salon

A. Aubrey Bodine

Dear George

James N. Doolittle

GEORGE A. YOUNG, Editor
Camera Craft
San Francisco
California.

Dear George:

Well, you asked for it so here you got it!

I just seen a pre-view of the Los Angeles Salon—you know the one the Camera Pictorialists put on down here since 'way back just after the war every year. Well, George, It's a honey!

Also I seen most of them every since their racket first started and got all steamed up over the high standards of excellence and all that sort of educated talk but I really think this time we got something.

You know theres only just so much stuff can be taken with a camera. Set several thousand folks to work with one of these instruments each year with no closed season and it's amazing how much work they can get out.

Of course they don't all send their pictures to our show—several of them don't—but we get enough of them so we can have a pretty good idea of whats going on.

We been looking at photographs from the days when they used to make great big shots on paper, coated with glue or something. Also they used to cheat the stockhouses by making printing paper at home out of platinum and salt. Even only a year or so ago we got prints made on expensive-looking charcoal paper with ink that was put on with a brush. Of course, George, none of these looked much like photographs but they were darned artistic and did we go for them! Why some of those pictures were so much like etchings that people actually used to buy them!

Then you remember the time when they had lenses that would make everything look like it had been photographed through a screen door? We got acres of this kind of stuff; we hung it up on the wall and, really, if you got far away enough, it looked like paintings. It really did!



"Ultimo Ruffio"

Elia Guiseppe

20th Los Angeles International Salon

Then there was arguments in the camera clubs and photo magazines about, is photography art. And was this hot! Why, I remember when the fair was going to be in San Francisco in 1915 and they was inviting the world to get in on it, a lot of photographers wouldnt send their stuff to us because the show was going to be put in the liberal arts building instead of the fine arts palace!

Can you imagine such silly ideas about photographs! Why, here we get tons of photos every year and they are exhibited in the print rooms down next to the indian baskets and war souvenirs. But the public goes for them and dont seem to care if its art or not just so its something to look at on a rainy sunday. But the main idea, George, is they DO look.

I guess I told you several times off and on that things was getting different in photography. Even while art was being done with a camera there was now and again a picture which sneaked by a jury that was sort of conspicuous by looking more like a photograph than anything else. The customers wondered how such things got in to shows and some of the boys who were handy at writing, hopped on these with both feet. They said they haven't got evidence of personal artistic feeling and execution. But still we kept getting more and more of these snapshot-looking pictures until all of a sudden the idea gradually got into our head that darned if there isnt something in photography after all.

But George, you know what Norma Shearer said to Leslie Howard about call a rose anything else and it would smell just as good! Well,



"Educande"

Italo Bertoglio

20th Los Angeles International Salon



"Late Afternoon—Robertson"

Monte Luke

20th Los Angeles International Salon

perhaps it dont matter after all what we name the things we do with films, paper and chemicals just so's the folks can get a little art out of their system and make others look at it. Does it?

Up above here I mentioned about a jury. I didnt mean a legal jury, the kind they have when you get in to a mess with the cops. The kind I mean is a sort of committee who gets together—more or less—to pick over the pictures which we get sent to our annual exhibition. Most always these judges—thats what we sometimes call them—are painters or regular artists who have been to school and have studios where they make the props for art galleries. They know a good deal of talk about composition—anyway, talk. But theys got to be some way of making up our minds what the photographer hadnt ought of done and the public would like to see. So, we invited for a long time a bunch of these boys to look over all the séveral hundred pictures which came to us so's we could holler about how fair and impartial the selection was.

Sometimes, tho, George we didnt have all artists. Once in a while we'd have other photographers, interior decorators— even once we had an art *director*, an editor and a Kinema-tographer. They were like the gang which built the tower of Babbleon. They couldnt seem to get together. Each one of them had his own idea which didnt seem to jibe with any of the others. They got argumentive. They even got noisy. And we got a terrible show!

Then we tried out a gage where three men of our own crowd was the jury. We were a bit cagey about this outfit so we made them work



"Tip-Toe"

Piet L. Spoor

20th Los Angeles International Salon

the "silent manual." I mean, George, they couldn't argue. They just went around voting to themselves so not even anybody knew what they was thinking. Even so, we didn't have such a hot show!

At least, we didn't get much different results no matter what kind of a system we used. Just so much stuff comes here every year like I said, so our job is to weed out most of the pictures that have been worked to death for years and years and see if we can't save enough to give the exhibitors a break and at the same time have enough to give the customers a treat—if that makes sense. What I'm driving at is, we're putting on a show. You know if you're an actor you might not like what the director makes you say or what the author has written but if the folks who comes to see you clap its hands, you've got something! Ask any box-officer.

That's just the way we are, George.

But lately we fell on an elegant scheme. Since all kinds of a jury couldn't help but get balled up over art it looked plausible that if we had one good man to do the work he'd at least keep quiet on the job, take all the raps if the show went sour and have the kind words all to himself in case it turned out to be a wow. Well, you know, we started that out about four years ago and it will be all right with me if we don't ever get any more bright hunches.

Right at the beginning I said I'd just seen a pre-view of the Salon which means I just came from the art gallery where they had about thirteen hundred pictures layed out all over the place. If you put them end to end they—well I can't go into stasticks any more than they would go in to the art gallery if they was end to end. Besides they don't put them end to end in an art gallery.

The Camera Pictorialists was all there to help with any little details like picking up the rejected pictures and stacking them where they wouldn't get mixed up with the ones they really meant to hang on the wall. Also they'd hover about to see if any of their own stuff happened to be accepted. Real little helpers just the way the crowd is with an umpire at a series ball-game!

But still the judge works on. He starts off for an hour or so just looking around; sort of shopping. He's able to get a general view of the *ensemble* (fr) so when he really puts his mind to it, he knows about the level of the entire works.

After he's been around and around he begins to turn a few of them down; I mean he actually turns them down so he can't see them again. This gives him less stuff to ignore and more to concentrate on. Pretty soon there's more down than up. But, George, you ought to see the back sides of some of these prints! They look like a suit case after a cook's tour. Why, some of those pictures have been so many places that there's actually a couple of layers of exhibition stickers on them. The funny thing is the best stuff hasn't been anywhere if labels mean anything. Reversely, if they do, a good many of them are starting out on a long trip!

I bet you can't guess whos the jury this year!

No, it's Will Connell. And I just came away feeling it was a good thing he was. He's been in this pictorial racket about as long as most of



"Queen Anne's Lace"

Rowena Brownell

20th Los Angeles International Salon

us and knows what we're shooting at. He makes good pictures himself so he recognizes one when he sees it. Still more, he is able to detect evidence of that something which indicates latent up-and-comingness so even tho an occasional shot isnt so hot, it doesnt do the show any harm to give the young chap a break. Also I noticed that some of the old hands were treated a bit rough where it looked to him like they were trying to get in just on account of who they used to be.

You remember I wrote you one time that we decided to make some honorary members like they do in them foreign societies. Only we dont give them initials; we just appoint them and instead of letting them pay for the honor we just waved the entry fee and let them send four pictures of their own selection. Remember, George?

Well, lately, they havent been doing right by us. Maybe they like to have their stuff judged just the same as the rest of the contributors. Maybe, even, they dont know which is their good pictures or bad. Again perhaps they're taking this thing as a sort of game where you keep score and see how many prints you have accepted in how many shows, so you can get your name printed in the back of a book which says you're a "whos who."

Anyway, these associate members, we call them, will probably still be associate members now they're in but I'll bet they get their pictures judged next year which will shoot their score all to pieces! We'll pass a sort of Pictorial Recovery Act. This gives me a thought, George; how would it look in print if we let these folks put P. R. A. after their name?

I bet you thought I was going to write you a review of the Salon! But if I did, all I could do would be to say things about the prints which have been said about all the pictures ever made. Also I'd have to mention names of the people who sent in their offerings and that would be awfully tiresome for some of the names arent so much to read about anyway. The exhibitors get a catalog which means Connell thought his pictures was good. The visitors get a copy (twenty five cents at the desk) so who else cares?

Bye, George.

JIM DOOLITTLE



"Logger Rhythm"

Wm. A. Oberlin

20th Los Angeles International Salon

From Newton's Spectra

Jerre Bruce

MIAMI. A tile pool. Water a rippling jade. Vividly striped umbrellas; beach chairs and tables; vanity case bathing suits; tanned Adonises. Off to one side, a tripod and camera. Behind it, a group of men glancing skeptically at the sun. There is a moment's silence, an infinitesimal click, a sigh of satisfaction. The result causes advertisers to gasp, photographers to prick up their ears, and the ghosts of Maxwell and his fellow theorists to turn over in their graves. Nickolas Muray has made the first great splash in illustrative color photography. An outdoor scene in natural color with living models and only the sun for illumination, snapped at 1/25th of a second!

That was the first great splash, mind you; not the first use of color photography for advertising purposes. Paul Hesse was keeping step with Muray. Anton Bruehl most definitely had been heard from. That reverberation was not an explosion; it was Victor Keppler. And there were a host of others whose names have added progress and glamour to this, the newest of the arts. If one wishes to begin at the beginning of it all, he must tramp way back to the cavemen. Archaeologists have unearthed tablets bearing figures stained with, they claim, juices of herbs. Early monks colored their art. And the Japanese are said to have been the first to print in color. Pertaining to color for photographic purposes, however, we should start with Sir Isaac Newton and his discovery of the solar spectrum. His theories opened up vast fields of research, and one of the first results was that of the formulation of the three primal colors. J. C. LeBlon tried to print in color from copper plates, using the seven spectral colors. In 1722, he concluded that all colors could be reproduced by three plates of red, blue and yellow.

Senerfelder's discovery of lithography toward the end of the Eighteenth Century, and its commercial application in 1812, marked the first practical use of the mechanical superposition of color printing. James Clerk Maxwell, an English physicist, suggested reproducing objects in color by photography in the middle of the Nineteenth Century. Ducas du Hauson, in 1862, conceived of an efficient chromoscope and screen plate. In



From a Natural Color Photograph by Nickolas Muray

Courtesy McCall's Magazine



From a Natural Color Photograph by Victor Keppler

Courtesy E. I. DuPont de Nemours & Co., Inc.

1865, Collen wrote a treatise on the three color theory as applied to photography. At that time, Baron Ransonnet also had the same theory, applying it to lithography as well as to photography. Ives and Sanger, and Shepherd and Heron, probably were the first to use the one-shot color camera about 1870. The first color prints came along in 1889.

Just as color photography was conceived of many years, even decades, before it became practicable, so was the one-shot camera designed some forty years before it was used. And, oddly enough, the processes of today differ little, if any, from those first experiments. The principal changes have been confined to more perfect reflecting surfaces and to speed. The type of camera is largely a matter of choice. Some excellent makes are available for the professional, the serious amateur, or for him who merely experiments as a hobby. As the experienced know, any ordinary camera may be used by changing plates and substituting blue, green and red filters. Ordinary plates are, of course, color blind. It is rumored that



From a Natural Color Photograph by Paul A. Hesse

(Courtesy Hiram Walker, Inc.)

various lengths, each length, or wave, characteristic of a particular color. In addition, there are the ultras . . . red and violet. Oddly enough, the source of all color is white. Just as a rainbow is caused by the sun pouring through a wall of moisture so does a white light, passed through a prism, come out a galaxy of many colors. That white reflects colors, whereas black absorbs them, is common knowledge. However, that quality of a color making possible the absorption and reflection of particular light waves or vibrations establishes that color.

Then there are the harmonies, primaries and pigments, the secondaries, the complements, and the adjacents. For these, one should have and know the color circle. I doubt whether accurate color combinations could be arranged without, or at least without the knowledge of, the color circle. The light primaries are those from which other colors may be produced but which may not be produced by any other arrangement of colors. Secondaries are created by the blending of two primaries. There are no pigment primaries which together will produce yellow, red or blue, yet secondary colors may be obtained by two of them. Complementary colors are those which balance or neutralize each other; and those bordering on another, such as turquoise, are adjacents. Important in an understanding

of color are the terms hue, the shade; value, the degree of light or dark; chrome, brightness or paleness. Too, there are those colors suggesting warmth and coldness, such as orange and blue.

With this knowledge, which to many is instinct and to others the result of study and the trial and error method, the photographer may attack composition. For this, even more artistic knowledge or ability is needed, for color may become an unruly master. To many, there is the tendency to become too vivid, thus producing a good theme so blatantly it becomes repellent. Soft tones and warm colors naturally create a more mellow effect than stronger colors. In Mr. Muray's studio are many pictures, each a worthy example of the artistry which has brought and kept him to the fore. To me, a layman, one of the most striking is the first, or one of the first, of his attempts with color. It is a landscape in early autumn. The foliage possesses all of Fall's rampant beauty yet still blended with the soft virility of the not yet dead summer. It is printed on linen paper, thus bringing out a pigment quality which suggests an oil painting. Paul Hesse obtains the same effects in his outdoor shots. And that effect is *natural* color . . . Nature. She is a much over-worked mistress, Nature. Nevertheless, there are few who can surpass her. Consider the complexions of the brown-eyed blondes and the blue-eyed brunettes. Are they not strikingly different in tones from the blue-eyed blondes and the brown-eyed brunettes? Nature's color schemes! The newcomer, as well as many already established, could do no better than to follow Her dictates in harmony and arrangement.

An expert knowledge or sense of values, however, cannot necessarily create composition. That in itself is another and important phase of skilled artistry. For instance, place together a tall bridge lamp and a squatty teak wood stand. The photographic result could be grotesque through one's handling and an excellent study of extremes through another's. Unfortunately, agents or clients too often design the layout and leave the photographer to scratch his head, ponder and cuss. In the last analysis, it is Mr. Camera-man who must know what to give Mr. Client, even though what he gives him is not exactly as sketched but, perhaps more perfect in artistry.

There is as much skill required for stills as for group or outdoor shots. Many specialize or have a tendency to concentrate in one particular field even while working in general studies. For instance: Mr. Muray's heads and studies with children and animals have that definite touch which makes them comparable to an artist's painting, if not indeed often exceeding the painter's skill. James N. Doolittle, of Los Angeles, has shown what can be done in the field of portraiture with his superb studies of motion picture stars. Messrs. Bruehl, Hesse and Keppler do a great deal of group work, and the latter two in particular outdoor scenes. If Mr. Keppler has a group admiringly surrounding an icebox, you feel that the subjects are genuinely thrilled with the mechanical contrivance; more than that, you can very nearly tell the character of the individuals by the color of their clothing and the way they wear it. If Mr. Hesse has a shot of an eloping young couple in a roadster at a gas pump in



*From a Natural Color Photograph by Victor Keppler
Courtesy Saturday Evening Post Institutional*

front of a red barn, the ground covered with snow and a typical New England farmer in typical Yankee costume serving them, you can bet that the picture is a living study of the actual scene . . . you can bet, too, that more than likely Mr. Hesse drove several hundred miles (models, equipment and all) to photograph the authentic scene. In Mr. Bruehl's studio is a study of Max Baer in red tights, his fists raised in the pugilistic manner of a quarter century ago, and the background the scenic replica of the sets common in that period. So true to detail is it that, but for the face of Max Baer, the picture might be a colored lithograph of 1890.

I do not mention this particular picture, or the others, to stress the composition, skill or taste of any one photographer; rather, as examples of the thoroughness necessary for accurate and authentic workmanship. Each of the aforementioned exemplifies the fact that a great deal of color is not required. As a matter of fact, more good taste and skill is necessary to use bright colors than pale colors. Many delightful effects may be made through neutralizing; and complementaries may be used successfully to accentuate the principle object in the set. Dark colors, of course, emphasize light. There is a great deal to be said about balance, but few hard and fast rules. As in most professions dependent upon individual skill, it is up to the photographer to express himself and his ability through his work. About illumination, Bruehl says: "Never mix daylight with nitrogen, and bear in mind that colored floods more often than not are apt to destroy a desired harmony."

The novelty of color work has now passed. For newcomers, it is a matter of following in the footsteps of the leaders, plus scientific or technical knowledge and practice, with the ability to acquire a sense of color values and arrangement. Yet, the world is ready and waiting for those who wish to add their bit. Those who look ahead to their part in the future of color photography should kneel in thanks to national advertisers and their advertising agents. Because they have been willing to pay for the best, photographers have been able to experiment without the handicap of cost. Without this profit margin at their disposal they could not have made such great progress in so comparatively short a time. Due to this same help, sharpness and register will be much improved during these next few years. Speed, however, is the frantic cry. Speed, and yet more speed. When speed is obtained, color photography will be capable of everything now possible in black and white. It is so often the catching of that fractional second of expression, position or motion which determines whether or not a picture will be superlative or just good.

What about the amateur! Paul Hesse says: "Study art for a foundation." Anton Bruehl adds: ". . . most decidedly, a sense, natural or acquired, of color values." And Nickolas Muray: "Patience. Don't be satisfied with the first two or three prints; nor be disappointed in the first two or three if they are not what you hoped for. Make twelve, if necessary. Make fifteen!" Victor Keppler chimes in with: "Work! And then more work! Jack Ward (his assistant) and I once spent seventy-two straight hours trying to overcome a blemish. We finally discovered it was due to the water; it contained too much chlorine."

Pictorial Possibilities In Paper Negatives

William Edwin Booth

IT has been truly said that one of the strongest appeals of the photophic art today, lies in the opportunity afforded the individual to create pictures with his own hands. Especially is this true of those artistically inclined persons who have been endowed with the capacity to appreciate the works of the great masters of painting and sculpture. Such men as Leonardo da Vinci, Rembrandt, Peter Paul Rubens, Michelangelo, Titian, and Raphael, have left recognized masterpieces of a grandeur that people the world over love and admire today. Their art was not transitory and I am of the opinion that the serious amateur will do well to study these masters with an eye to discovering those secrets which they applied to their paintings and which he may advantageously apply to his own attempts in pictorial photography.

These old masters strove to make their paintings life like; to make their pictures live. How well they succeeded! Their work lives today not only because they graphically depicted things as they appeared to the eye, but also because they created pictures into which the laws of composition, emotional appeal and other elements (recognized today as essential to pictorialism) were skillfully infused.

"But," you will say "I can not hope to make a photograph as good as a painting by Rembrandt!" Perhaps you can not, but I venture to say that if you will try to make a photograph embodying the principles Rembrandt used in his pictures, that you will have a result which may well spur you on to greater achievements.

A motto that strikes me as being appropriate for the amateur photographer is frescoed beneath an arch in the lobby of the Library of Congress in Washington. It is: "They build too low—who build beneath the stars." Applied to what has been just said it would mean that to aim beneath the masters of art and painting is for us not to aim high enough when making our pictures.

"Their technique was flawless," you will say, "and they painted in

an oil medium and could change a bad stroke or line if it was not right." But was their technique always flawless? I do not think that this was so. It would be more correct to say that each had his own technique. It has been said that some of the merest sketches of Raphael, when discovered after his death, composed of the fewest lines, possessed such artistry that they seemed complete pictures. These could not approach in technique his finished paintings, yet were satisfying in themselves. So may you, developing a technique of your own, and not merely that of the camera, more nearly approach the pictorial.

"But what about the bad lines, how can I change them?" you ask. That and more is taken care of by the use of the paper negative process. This process not only allows you to eliminate flaws present when the photograph was taken, but enables you to put a certain pictorial quality into your pictures. It is a fascinating procedure, one that allows free play to your artistic abilities and inclinations.

My old art teacher once said to me: "Don't resort to tricks in your drawings to gain the observer's attention, be true to your subject and true to yourself. Make your pictures so that people will want to continue to look at them. If a picture is good, it is one that can be hung on the wall and lived with day after day without making us tire of it." This advice had been given to art pupils long before my teacher's time, but it is sound even today.

The paper negative process is a method extensively used by some of the prominent amateur photographers who produce really fine work. If you will observe the paper negative prints in the various Salons and Exhibitions, you will no doubt realize that this process "has something," so to speak. You can get this "something" into your prints and your pictures will undoubtedly benefit from the intelligent and patient application of the control work at your command.

Naturally the subjects you wish to work up by the paper negative process should be inherently pictorial. We should not expect a paper negative print to look like a straight photograph.

The artist in us rebels at too much so called purity. Aren't we trying to make PICTURES, rather than merely photographs? The photograph is only the basis of our pictures.

How often have we turned away from what at first appearances seemed to be a perfect picture, with either a pole or equally distracting object spoiling our chances. Such opportunities can be grasped and used to advantage by employing the paper negative process to make our final print.

As in most lines of endeavor, to obtain the full benefits from the use of the paper negative, we must know what effect we wish to produce and whole-heartedly strive to put the best of our abilities into the process.

If we are to create pictures from the everyday things that we behold on all sides, we must see as the artist sees. We must visualize the finished product in our imaginations as it will appear in completed form. Whether high or low key, rough or matte paper, black and white or toned, all these things go into the making of the final picture. To eliminate the

improbability of making pictures from accidental shots, we should strive more earnestly to plan our photographic work. When an idea occurs to us we should make a note of it and get the photograph at the first opportunity. Of course, I do not mean to pass up any unexpected shots, but rather accept these chances as added materials.

The use of the paper negative has made acceptable pictures out of what at first blush appeared only ordinary material.

To actually begin the paper negative process, I recommend the following materials as essential in addition to the usual dark room equipment:

Wolf Carbon drawing pencils, BBB; B and HB.

A French Stomp, for blending the pencil work.

A bottle of Higgins' Ink, for blocking out backgrounds, etc.

A brush (Windsor Newton) for use with ink.

A block of Art Gum.

An 8x10 or 11x14 inch printing frame.

A pack, either of Charcoal Black; Agfa Brovira Velvet; Defender Velour Black F, or Eastman Single Weight Bromide.

The artist materials can be purchased cheaply from a dealer in Art Supplies.

There are several methods of producing paper negatives. One is to make a positive on paper by contact with the film negative (which was made by exposure in the camera) under a very weak light for a brief time. This produces a small paper positive, which is placed in the enlarger and an enlarged paper negative is made, upon which control work can be done. This method produces a grain effect suitable for broad subjects.

Another method is to make a positive print on film or plate by contact or projection. From the resulting positive a negative print is made on paper by contact, if the positive was made by enlargement, or by projection if the positive was made by contact. Either Isopan or Panatomic film is recommended for this positive. As a guide in exposure, use a 10 watt light about six feet from the printing frame when the positive is made. Cut test strips of the film and use to obtain correct exposure. For flat subjects, use process film and dilute the usual D-72 developer about 1 to 4 or 1 to 6. However, strive to get the middle tones in both positive and negative as each successive step tends to increase contrast. This should be watched and the various films and papers not developed too much. Soft development is therefore, recommended. With this film positive, hand work should be done only on darkening distracting light patches. Other work is likely to be noticeable when printed. If more work than this is intended, the positive should be first enlarged on a matte back film. Carefully done hand work can be safely attempted on this large positive. The advantage of this method for delicately modeled subjects lies in the fact that the paper grain is lessened.

The usual procedure is, however, to make an enlarged positive on paper. This allows almost any hand work to be done with comparative ease and satisfaction. On this positive we may make a black background, or graduate the background from light gray to black in portions to suit



Fig. 1

our taste, by applying ink or pencil to the proper areas. Remember, on the positive we darken lights and produce blacks where desired. To lighten tones, we apply the pencil to the negative.

This enlarged paper positive is, after working up, placed into contact with paper in the printing frame and a negative is produced in this manner by exposure to light. Test strips are used to obtain correct exposure.

It is essential that we bear in mind the fact that both the positive and negative should be judged by transmitted light—that is we should view the print with the light coming through the paper.

The problem of exposure is solved in the following way. Make a test and determine correct exposure as viewed by reflected light; that is judge the positive or negative as you would an ordinary print. The development should be normal. When this is done increase exposure three or four times for the working print. Develop normally to hold the middle tones. This is essential for quality in the finished result. Deep shadows and highlights can be controlled by hand work where desirable, but handwork in the middle scale of tones is likely to produce false tones unless done by an experienced hand.

A short exposure on the reverse side of the print after regular exposure causes a slight fog and makes paper grain less noticeable.

When the paper negative is fixed, washed and dried, proceed to make a proof print. If further work is desired, essential highlights can be penciled in either on the front or back of the print. Broad effects are pro-



Fig. 2

duced by applying the carbon pencil evenly over the back of the paper and with the stomp gradually blending the tones.

There is no advantage in oiling the paper negative as the sensitive materials used today are fast enough to permit short exposures. It is advised against because the oil is likely to produce spots on the final print. It also increases grain unduly.

When drying the thin negatives or positives it is well to adhere to the following procedure: First, remove all the moisture possible by blotting. Second, place between blotters for an hour, then remove and put between fresh dry blotters for another hour. Place face down on top of dry blotters until the edges begin to curl. Put the prints face to face, back to back, and then slip into one of the black inside envelopes photographic paper is packed in. Frequent inspection will reveal how the prints are drying. When almost completely dry, pick out the best negative or positive and put it between two flat dry discarded prints, place in a printing frame and clamp the back down. Leave overnight or longer. This will enable you to have those thin prints free from wrinkles which otherwise spoil good pictures. A trick of making clear prints from negatives with a few wrinkles is to build up this wrinkled area with irregular shaped pieces of paper, much in the same way a printer builds up worn type that is not type-high. Of course the paper pieces must be placed behind the print and away from the printing light in the frame.

The accompanying illustrations should be compared point by point,



Fig. 3



Fig. 4

to see where the use of the paper negative control process resulted in superior prints over those made by straight enlargement.

Figure 1—"Little Church in the Valley"—Straight enlargement.

Taken on a late afternoon in January.

Note (a) blank sky.

(b) branches of trees are bare and ugly.

Figure 2—Final print from paper negative.

Note (a) how sky is darkened except behind the church where a glow makes the Cross stand out.

(b) the dark tone in the sky makes bare limbs of trees unobjectionable.

(c) edges of picture darkened as was the near slope of the hill and the details just beyond the hill. All this hand work was done on the paper positive.

Figure 3—"Time Worn."—Straight enlargement.

Note (a) clapboards of the house in background.

(b) the whiteness of the drape carries the eye out of the picture at the base.

Figure 4—Enlarged paper negative.

Note (a) clapboards have been penciled down to render them in a more even tone.

(b) drape has been darkened at the bottom.

(c) wrinkles are accentuated on face and hands.

The tones in this positive are several times deeper than a normal print. However, inspection by light coming through the paper reveals that the tones are about right.



Fig. 5



Fig. 6

Figure 5—Paper negative. (front)

Note (a) clapboards have received further work by pencil and stomp, obliterating them.

(b) highlights placed on hands and face; hair over ear penciled deeper to appear lighter on finished print.

The tonal scale of this print is noticeably greater than Figure 4.

Figure 6—Paper negative. (back)

Note (a) clapboards again worked down. Negative darkened on background by cheek to accentuate the face.

(b) freckles and wrinkles are lightened in their highlight portions as also the cane.

(c) cap and drape have been modified.

Figure 7—"Time Worn"—Final print.

In this illustration we can judge the effect of the control work and modifications which are described in detail farther on in the text.

Personally, I prefer Brovira Velvet, single weight, for my paper negative work. This paper allows work to be done on both the front and back of the positive or negative. Some papers work best on the front, others best on the back, but Brovira Velvet works well on both sides. Another advantage is that this paper can be obtained in four degrees of contrast. This allows almost unlimited control of contrast by selecting a hard paper for soft negatives when making the enlarged positive, or a

soft paper for hard negatives. This choice of papers is also of advantage when making the paper negative print from the positive.

It is well to blend with the stomp all pencil work, because the particles as first deposited hold the light back to a great extent and the difference between the tones of the surrounding areas and the pencil work becomes very noticeable. However, for fine lines or other accents, the carbon pencil HB is left just as it is applied. This work should be the last done, for as the broad areas are blended, any fine lines are apt to be obliterated if applied before the blending.

A choice of either contact or enlarging papers allows wide latitude in the selection of the most suitable surface on which to make the final print.

Suppose we take the picture of the old darkey called "Time Worn" and go through the entire process:

In previous attempts, at making a straight photograph of this subject, something was always forgotten—the face and dress came out the same general tone, or the background blended with the shadow side of the features, so that they were comparatively lost. After numerous tries, I decided to use a white sheet instead of the usual dress—let the background go and make a paper negative print. When I asked her to pose again, I inquired about a cane and she showed me her walking stick, part of which is visible in the picture. An idea came to me. Why not show her hands and stick too? So an exposure was made carrying out this thought. The film was fine grain Pan. developed in DK-76. The exposure, 1/10 Sec. at F: 5.6 calculated by Weston Meter. After developing, fixing, washing and drying in the usual way, a print on single weight Brovira Velvet 11 x 14 was made 3 times darker than a regular print. This was a straight enlargement developed in D-72 for about 2½ to 3 minutes, fixed, washed and dried. I now had what is known as the positive. On this positive I could darken light patches which were distracting in the background and also other points needing attention. A thorough inspection of the print at this point by transmitted light enabled me to form a line of attack, so to speak, and I saw that besides the background the drape should be toned down near the edges of the picture and gradually blended. The cane was too black and took away from the interest of the face and hands. The cap also needed a slight modification. Now, the cane could not be touched on the positive, as that would make matters worse, it being too black already as the only power of alteration in the tones on the positive is to make them darker.* Consequently this was left until the negative was made.

In working up the background on the positive a Wolf Carbon drawing pencil BB was gently applied to the portions which were too light and evened up with the French Stomp. The Stomp not only blends the work but removes all the surplus, preventing uneven spots by some of the pencil rubbing off. The drape was darkened near the picture edge and blended with the stomp toward the center.

The whole idea was to make the face and hands tell the story. The

*This does not take into account the fact that reducing solutions such as Farmer's Reducer, or the solutions supplied in the Etchadine Kit may be applied to either positive or negative.—Ed.



"Time Worn"

Wm. Edwin Booth

Fig. 7

background and drape or other items must be subdued so as to be there only as they support the salient and important features.

Let me say at this point that greasy fingers must be kept off of the surface of the paper. It is best to decide whether we want to work on the front or back of the paper and then with Scotch Tape tack the print in the printing frame and leave it there. I find that a 10-watt yellow or amber light shining through the positive or negative gives a light much easier to work with and to judge more correctly the relationship between the photographic image and the pencil work.

Next a few character lines on both face and hands were strengthened by the wolf HB which is a hard pencil for fine or close work.

Then a proof print was made; that is, a print was exposed and developed from the positive and inspected by transmitted light to judge if the hand work had been done properly. It was thought that this negative could be used by doing a bit of work on what was destined to be the lighter tones of the finished print. Therefore, this print was fixed, washed and dried, making it ready for the control work. To further remove the traces of the weatherboard house in the background, pencil was applied and smoothed down so as to blend the dark lines and the light areas into a more even tone. The highlight portions of the wrinkles on face and hands were lightened, thus making the lines themselves appear deeper. Then the first proof print was made. This was slightly flat in that the background and the drape appeared nearly the same tone. It was decided to lighten the subject's left shoulder and part of the front of the drape to make it stand out from the background. The front of the cap was lightened to correspond with the other changes. The eyes were brightened a bit and the few strands of gray hair brushed back over the ear were brought into more prominence. A little density was added by penciling on the ears and neck. The fold in the crook of the arm was made less dark so as not to be a distracting spot. The lower portion of the cane and shadows under the hands were also lightened. A finished print (Figure 7) was made on Indiatone Fabric Rough white and toned in Flemish gold toner.

My advice to those amateurs who are pictorially inclined is to take advantage of the paper negative process. Make a trial on some negative that shows promise of better things. Don't, at first, do much hand work, but follow the steps of procedure as outlined to familiarize yourself with them. Try a 5 x 7 first and then an 8 x 10. When you have mastered these sizes you should feel justified in making a 11 x 14 print for exhibition purposes.

Should you, as an amateur, wish to take up a branch of photography which allows free play to your abilities, the paper negative process is ample to suit the most exacting. You will have discouragements, waste a lot of materials and time; yet it will not be really wasted if you master the simple process. So jump right into it, and the best wishes of a fellow enthusiast are yours.

Practical Miniature Camera Photography

H. Crowell Pepper

Part IV: The Negative

(Continued from January issue)

This subject of Filters is a difficult one for the average Amateur and much space could and should be devoted to it but unfortunately this series of articles will not permit my doing so. I am rambling along mentioning certain matters which really represent problems submitted to me. The "multiplying factor" of filters is a subject often submitted for explanation. Why does my filter require a greater multiplying factor with orthochromatic than panchromatic film? and why is this factor less for the same panchromatic emulsion indoors under artificial light than outdoors under strong sunlight? are typical. A scientific explanation is difficult without a definite knowledge of the factors, absorption curve of the particular filter and the color sensitivity curve of the emulsion. Let us assume our filter does not transmit light below the wave length of 500 which means simply that it does not transmit any ultra-violet, violet or blue-violet but does not absorb any green or red. Let us also assume that our orthochromatic film has a blue sensitivity of 95% and a green sensitivity of 5%. Since our filter, a sharp-cut one, does not permit the blue to affect the plate or film emulsion and only transmits 5% of the effective light we must expose twenty times normal to secure 100% exposure of our film. When we use a panchromatic emulsion we will find a great increase in the sensitivity to the green and red and a lesser sensitivity to the blue. Assume our particular pan emulsion has a sensitivity ratio of 67% in the blue and 33% in the green and red. Our filter cuts out the blue so that only 33% of the light reaches the emulsion and we require an exposure slightly in excess of three times to obtain 100% exposure. When we turn to a comparison of our same panchromatic emulsion and filter used under daylight and artificial light we must remember that our artificial light is richer in green and red and weaker in the blue. The degree of variation naturally changes with the type of light used indoors. Let us assume the ratio to be blue 50%, green 34% and red 16% for this particular emulsion when used with tungsten lamp. We then have a transmission of 50% with a multiplying factor of two. This explanation is based upon assumptions but you will find

upon examination the filter factors furnished with emulsions by the various manufacturers these multiplying factors are not far wrong. Another question often asked is: How may I determine the factor if I combine two filters? The sanest answer is do not do it since there is little if anything to be gained. If you combine for example a "K1" and a "K2" and use a Panchromatic emulsion the factor for the "K2" will be approximately correct. Take as an example a so-called 3x and 4x filter. These combined will not require a 7x exposure. As a matter of fact the multiplying factor depends upon the absorption and transmission characteristics of the particular filters, upon the color sensitivity of the emulsion and the color characteristics of the light source. It is easy to conceive of a combination of filters passing so little light as to make their use in combination impossible. No rule may be given which will enable the reader to determine the exposure increase for combinations of filters.

I cannot close this subject of filters without reference to some of the optical properties and their effect upon the resulting negative. I have read a number of magazine articles covering the construction of filters but I have never attempted to make one. Few realize that the definition of a good lens may be ruined by a poor filter. Few realize that the computer of a fine lens does not take into consideration the addition of other lenses, auxiliary, or filters. All corrections are computed upon the basis of the number and form of the elements used in a particular formula. The minute you add another element such as a filter you are uncorrecting the lens and introducing aberrations. These aberrations vary as the square of the focal length and you will find that reputable filter makers construct their filters to give the least loss of definition for a definite focal length. When using long focal length lenses filters made with optical flats are needed. Many telephoto "shots" prove unsatisfactory because a cheap filter has been used and the aberrations introduced have produced a blurred image. The aberrations are those inherent in the glass used and those resulting from strains in mounting. Purchase the finest filters, i. e. those in which optical glass is used and for the best results secure optical flats. The filter should not be too tightly mounted, such a mounting producing strains in the glass. The dye used should be evenly distributed. Cheap glass filters suffer from this defect and often the cheap dye turns a brownish yellow. Such a filter is worthless. When using a filter the focusing should be done with the filter in place. Since the focusing of the more modern miniature cameras is by means of a range finder the importance of the finest type of filter becomes apparent. Do not conclude that the placing of a filter upon your lens is all that is necessary to improve your results. The importance of the subject warrants a final brief summary of the problems. 1. Over-correction, resulting from using one maker's filters with another maker's films and under-exposure and over-development. The use of filters lessens the latitude of the emulsion and requires a greater precision in the exposure and further you are adding two glass-air surfaces with the additional loss in lens speed. 2. Loss of definition which increases rapidly with the aperture, both relative and absolute, and also with the degree of enlargement that is required for the final print.

(To be continued)

Cinema Section

Edited by

William A. Palmer

What's Wrong With Pictures

THROUGHOUT the country each month are held meetings of amateur movie clubs where the most capable and most enthusiastic filmmakers gather to trade ideas, hear talks, and compare their work with that of others. Of all the activities of a movie club, the most valuable is the screening of members' films together with films from other clubs. The maker of a film being screened can get valuable audience reaction and locate the places where his technique can be improved. By comparison with the exchange films from other clubs, the membership can see how the home product stacks up with the product from other parts of the country.

Motion pictures can be talked about, gadgets demonstrated and wondered at, lighting technique experimented with; but the whole purpose and end of all motion picture activity is the presentation of the completed film on a screen before an audience. In the case of the presentation of a film at a movie club meeting, the audience is of considerable importance. One would suppose, then, that the projection of films at the club meeting would be done with great care and much ceremony. What usually happens?

Judging from visits to a number of clubs throughout the country, the following is typical. The time arrives for the projection of the evening's program. A projector is dragged forth from its case and set up amid the confusion of moving a table into position and sliding chairs around to make room. Then follows some fussing to get the projector cord plugged into a light socket which is "hot" and the projector, aimed in the general direction of the screen, is threaded. A call is given to turn out the room lights and after a bit of button punching all the lines are turned off including that supplying the projector. With some further experimenting the switching problem is straightened out and the projector is started. A bleary beam of light shoots toward the screen, missing a perfect hit by some two feet at the bottom and four feet on the left side. Feverish manipulating of the tilting adjustment, coupled with a panoraming

operation, soon rectifies this matter leaving the operator free to focus the lens in time to catch the last flash of the main title. Thereafter things may go very smoothly, but often necessity for little minor adjustments of the projector go unheeded. Perhaps a bit of the frame line will be allowed to distract attention from the picture by its slight wiggling at the top or bottom of the frame. The focus of the lens may not be exactly right due to the projection of a film whose emulsion plane does not occupy the same position as it did when the lens was first focussed. Or perhaps the picture does not fill the entire screen area and is not centered, the margin on the left side of the screen being much narrower than that on the right, a condition which will give the same annoyance to the finicky spectator as will a crooked picture on a wall.

Such sloppy projection is not an occasional happening at movie clubs. Your editor has seen programs at many clubs in different parts of the country and he has yet to see projection that could not be improved. It is a situation for which no excuses can be offered. Good projection is easy and every club should insist upon it.

A Director of Projection

To insure satisfactory projection in the future we suggest that amateur movie clubs elect, along with their usual offices of President, Vice-President, Secretary, etc., an officer who might be called Director of Projection. This should be considered one of the most important offices and the person chosen for it should be an able technician who can be relied upon for expert showmanship. The following are the suggested duties of the Director of Projection:

1. He should procure an adequate projector and screen for each meeting. In some cases the club may own these units. Usually the screen at least is the property of the club. The projector is often loaned by some dealer, but whatever the source, whether the dealer, the club member, or the club, the projector should be in first-class shape, clean, well oiled, and equipped with a lamp which has no chance of burning out during the meeting.

2. The Director of Projection should try to have the films to be shown at the next meeting delivered to him a day or two beforehand so that he may run over them on rewinds, inspecting them for bad perforations and faulty leaders. The club should make an appropriation to purchase a hundred feet or so of opaque leader. This can be obtained from any film laboratory and should be positive film which has been fogged and developed so it is completely covered with black silver. All film laboratories have short ends and fogged pieces which they should sell, after processing them, for about \$2 per 100 ft. The Director of Projection should place lengths of this opaque film on each end of all the reels. On the head end or start, the common frosted leader should be removed, a two foot strip of opaque leader spliced on and then the frosted leader replaced ahead of the opaque film. In doing this the club will be insuring a better show by guarding against white flashes on the screen, will be performing a good turn for the owner of the film, and will be setting a good example to others who will use the film later.

3. The Director of Projection should arrive at the meeting place, set up the equipment and test it well before the time for the meeting to start. He should procure a good, firm support for the projector, high enough to get the projector beam above the heads of the audience if possible, and heavy enough to resist being easily moved out of position by members of the audience milling

around. He should look into the matter of electric current for the projector and learn the switches for the "house" lights. The cord supplying current to the projector should be fixed so that there is no danger of its being pulled out while the show is on by somebody tripping over it. It should be laid under a rug or suspended overhead. The Director should then thread up a film and run it part way through, checking the focus, framing, and alignment of picture on the screen. Preferably the picture should just fill the screen area. If the screen has dark or black margins, the projector beam should just overlap the dark border so that the border can form a neat sharp steady edge for the picture. If the screen has no border, the picture should come very near the edge, but should not fall past it to spill on the wall behind the screen. Such a pencil of light lopped off the edge of the picture is very distracting. Having checked the complete operation of the equipment, the Director should then rewind the film in readiness for the show.

4. The Director of Projection should personally tend to running the projector, being careful to guard against the screen going "white" at the beginning or end of reels. As soon as the opaque leader at the end comes in the gate, the light of the projector should be turned off. When threading the film at the start, the opaque leader should be used, leaving the frosted leader to fasten into the take-up reel. While the film is running, such details as being sure that the projector is running at the right speed should be checked to insure the performance being as flawless as possible.

A Director of Music

And while we are on the subject of proposing new officers for movie clubs, let us urge that a person be elected to take care of providing a musical accompaniment for the various films shown. Background music played by phonograph records has become standard practice by many top-notch amateurs and the movie club meeting should provide the means where others could see how effective the background can be. The Director of Music, as we might call him, would have as his responsibilities, the following:

1. He should procure an adequate electrical phonograph equipped with a volume control which will fade the sound completely out. A double turntable outfit is the finest thing for scoring films, but it is by no means essential. The club, of course, should bear the expense of rental of such equipment for each meeting. Better than rental would be the club's investment in a phonograph reproducer. Proper apparatus is not expensive, for excellent results can be obtained with the R. C. A. portable turntable and pick-up, selling for less than \$20, coupled into a midget radio.

2. The Director of Music should review films before the meeting and pick out suitable records. A point of economy can be worked by the club here, by electing someone to the office who owns a good library of records. The club, however, should have a certain appropriation for the purchase of records from time to time. These records can be placed in the club library where they may be made available to the membership to use for home showings. The purchase of records is not a great financial undertaking, for there has recently been placed on the market a series of "classical" recordings which sell at a very reasonable price. These discs, marketed in this country by Decca, furnish a great variety of compositions suitable for motion picture mu-

sical scores. The Romantic composers, often mis-called "classical," are the best sources of background music. The compositions of Tschaikowsky, Brahms, Schubert, Mendelssohn, and the more modern ones of Sibelius, Debussy, and Richard Strauss, furnish enough thematic music for any type of picture. The purchase by the club of a copy of "Encyclopedia of Music for Pictures" by Erno Rapee, (Belwin, Inc., N. Y.) will be of great service not only to the Director of Music, but also to other members who wish to score their films at home.

3. The Director of Music should set up the reproducing equipment and test it before the meeting and should "conduct" the score during the program. A good performance will give a much better impression to the audience and a great deal of satisfaction to the person in charge of the music.

We are indebted to Mr. T. E. Euler of San Francisco for the suggestion that the information printed below would be useful to the worker in 8 mm. movies, and for obtaining that information from the Eastman Kodak Company and passing it along to us.—Ed.

*Field Sizes for Cine-Kodak Eight Lenses Based
on Projector Aperture (.130" x .173")*

Footage (Distance film to title)	F:2.7 Model 25
2 ft.	6" x 8"
3 ft.	8 $\frac{7}{8}$ " x 11 $\frac{3}{4}$ "
4 ft.	11 $\frac{3}{4}$ " x 15 $\frac{3}{4}$ "
6 ft.	18" x 24"
8 ft.	23 $\frac{3}{4}$ " x 31 $\frac{1}{2}$ "
10 ft.	30" x 40"
12 ft.	3' x 4'
15 ft.	3' 8" x 4' 11"
25 ft.	6' 2" x 8' 3"
50 ft.	12' 4" x 16' 5"

For F:1.9 lens Model 60

2 ft.	6" x 8"
3 ft.	9 $\frac{1}{8}$ " x 12 $\frac{1}{8}$ "
4 ft.	12 $\frac{1}{4}$ " x 16 $\frac{1}{4}$ "
6 ft.	18 $\frac{3}{8}$ " x 24 $\frac{3}{8}$ "
8 ft.	24 $\frac{1}{2}$ " x 32 $\frac{3}{4}$ "
10 ft.	31" x 41"
15 ft.	46" x 61"
25 ft.	77" x 102"
50 ft.	154" x 205"



"Im Nebelschleier"

Ante Kornic, Ljubljana, Jugoslavia

Advanced Medal Print

■ In the writers opinion this picture ranks among the best things we have had the pleasure of showing in these competitions. The atmospheric quality is truly superb, while the composition is adjusted with great subtlety. Observe how perfectly the steeple rising out of the mist balances the mass of the large building in the foreground, and notice that the group of trees just above and to the left of the large building prevent the eye from moving to the left of the building and on out of the picture. Were the trees not there we would notice a slight weakness in the composition at that point. This picture constitutes a splendid example of composition by careful selection of the point of view. Had the camera been placed further to the right, the steeple would be moved to the right and it's present fine relationship to the large building destroyed. Had the camera been further to the left the group of trees previously mentioned would have been eliminated and the steeple would have moved over behind the building with consequent weakening of the composition. Had the camera been lowered the height of the steeple would be diminished and the height of the large building increased in relation to each other and the present harmonious relation between the two seriously impaired.

(Continued on page 95)

Second Award
Advanced Class



"Currying the Iron Horse"
Karl Emery, Baltimore, Md.

■We can see from this fine picture how unnecessary it is to show an object in its entirety in order to present the emotional impact desired. We see very little of this locomotive and yet the picture certainly gives us a strong impression of the massiveness and the tremendous power of the machine. The cloud of steam contributes much to that impression and in addition greatly simplifies the picture by obscuring extraneous detail. The piece of waste which dangles from the engineer's left hand is just as natural a part of his costume as his gloves or his pipe. Unfortunately the waste appears strongly contrasted against the brightest part of the background and because of that calls too much attention to itself. The attention should be directed to the action of the right hand, and consequently the picture would be improved by the elimination of the piece of waste.

No data. Print size 11 x 14".

Third Award
Advanced Class

■The elements of this picture are splendidly arranged and Mrs. Fletcher has here demonstrated once more her undoubted talents for still life compositions. Our one disappointment with the print has to do with the lack of aerial perspective, a quality that is usually well maintained in Mrs. Fletcher's prints. By this we mean that we do not feel in looking at the picture that there is space between the pimientos in the bowl and the vase behind them, or between the vase and the plate behind it. When the monochrome values are very close together, as is the case here, it is of particular help to study the set-up through a viewing glass. Such inspection would have probably disclosed the fact that, in monochrome, there would be little separation between the pimiento at the left of the group in the bowl and the vase behind it. An adjustment could then have been made in the lighting or a filter could have been used which would have lowered the tone of the pimiento enough to distinguish it from the glass behind.

No data. Print size 8 x 10".



"Pimientos"

Christine B. Fletcher
San Francisco, Calif.

**Fourth Award
Advanced Class**

■ Unquestionably Mr. Rex was intrigued by the vibrant quality of the light as it played over the corrugated iron sides of this building. His problem was to arrange his composition so that the illuminated area of the wall would be the primary interest. At first glance it would seem that the inclusion of the figure would be a mistake in such circumstances. Observe however that the main structural lines all lead to the point at which the figure is placed, and notice that if the figure were not there these lines would lead to a sort of dead end—an area of the picture almost devoid of interest. It is evident that Mr. Rex appreciated this fact and has used the figure to overcome that difficulty. In order to keep the illuminated wall as the primary interest he has very cleverly posed the figure in static fashion so that it attracts a minimum of attention, and acts principally as a bridge over what would otherwise be a weak area in the composition. The short section of rail in the lower right leads nowhere and is not an essential part of the composition, consequently we would tone it down to attract as little attention as possible.

Data: Baldax; Meyer Trioplan F:2.9; 1/25th sec. at F:8, on Agfa Superpan, in Buffered borax; 10x linear enlargement on E. K. Vitava Projection in M.Q. Print size 10 x 12".



"Linear"

*Ralph Rex
St. Louis, Mo.*



"Trouble"

Glenn D. Beer, Los Angeles, Calif.

**Fifth Award
Advanced Class**

■ Such entertaining close-ups as this do much to justify the claim that the candid camera is one means of producing worthwhile pictorial photography. This picture we believe would have placed higher in the judging were it not for certain technical shortcomings. The print is lacking in brilliance and it appears that enlargement has been carried a bit too far—to the point where definition is beginning to fall off. This is especially noticeable in the eyes, which of course should be the sharpest part of the picture. The highlights in the background at the upper right are distracting and should be drastically subdued. It would appear that the easiest means of doing so in the present instance would be the inking method described by G. H. S. Harding in *Camera Craft* for October 1933.

No data. Print size 11 x 14".



"Ice Weave"

H. W. Wagner, Worcester, Mass.

Amateur Medal Print

■ So far as we can recall this is the first time that Mr. Wagner has contributed to these competitions. Ordinarily a competitor is permitted to remain in the amateur division until he has won two major awards. However Mr. Wagner's work shows maturity of conception and execution that places it definitely in the advanced class and he is hereby notified of his promotion to that division.

It will be difficult indeed to do justice to this picture in reproduction but the original displays a delicacy of texture and graduation that is lovely to behold. The pathway of light leads the eye gently and subtly into the picture between the two groups of rushes, then curves back to the left attracted by the large group of rushes. The pathway of light and the small group of rushes then catch the attention once more and the movement is repeated indefinitely. It should be observed that if the eye tires and seeks an exit that there is an easy and natural one in the upper left corner of the print. The composition affords a perfect example of balance on the principle of the steelyard. The large group of rushes extending toward the center of the print is balanced by the much smaller group placed at the extreme edge.

Data: $3\frac{1}{4} \times 5\frac{1}{2}$ " Eastman 3A Special; 170 mm. Kodak Anastigmat F:6.3; $\frac{1}{2}$ sec. at F:32, on Agfa SS. Plenachrome in D-76; no filter, backlighting about 2 P. M. in January; E. K. P. M. C. #11 medium, in D-72. Highlight spots in lower right darkened on print. Print size 11 x 14".

**Second Award
Amateur Class**

■Mr. Dunlop appears to be making rapid progress in recent months and we expect that he will soon be competing in the advanced class. This is a lovely thing, delicately handled and very nicely placed in the picture space. Observe how the umbrella has been used to establish a composition. Without the umbrella the pose would appear stilted because all of the picture elements would be contained in a narrow vertical column. The umbrella provides a hint of action, fills a part of the picture space that would otherwise be disturbingly blank, and by broadening the base adds stability to the arrangement.

Data: $3\frac{1}{4} \times 4\frac{1}{4}$ " Graflex; 16.5 cm. Zeiss Tessar; $\frac{1}{2}$ sec. at F:5.6, on E. K. Panatomic Film Pack, in D-76; by two 500 W lamps, one on figure and one on background; Bromoil Transfer on Croquille Board; Matrix on Defender D, developed in Amidol; Mortensen Bleach. Print size 11 x 14".



"Yoshi-Ko"

*Van F. Dunlop
Rialto, Calif.*



"Three Musket Ears"

O. E. Longtin, Fresno, Calif.

**Third Award
Amateur Class**

■Mr. Longtin has found very interesting subject matter for this picture. It is surprising to notice the subtle differences in expression that are evident in the faces of the three mules. To our eye the print appears a bit crowded principally because the muzzles of the two outside mules come so very close to the edge of the picture space at the base and on the right. We believe that if about three quarters of an inch could be added to the base and about three eighths of an inch to the right (on the 11 x 14" print) that this crowded appearance would disappear. Such an addition

would have the further advantage of raising the eyes definitely above the center of the picture space. A slight amount of local printing should be applied to the muzzle of each mule in order to maintain some tone in each of these areas. A good print should almost invariably have a slight silver deposit in even its brightest highlights for there cannot be any suggestion of texture when the bare tone of the paper base is presented. This is particularly true when the bright areas are of considerable size as in the present case.

No data. Print size 11 x 14".

Fourth Award
Amateur Class



"Early To Work"
G. Raymond, Oklahoma City, Okla.

■ This is the sort of picture which many critics are only too ready to condemn as a "stunt" photograph. We are inclined to feel that this attitude is primarily a reaction engendered by the fact that unusual camera angles were very much over-done two or three years ago. That unfortunate condition has now passed away for the most part and we should be able to accept an unusual camera angle at its face value. The question then is, does the use of an unusual camera angle achieve any worthwhile result? This can only be answered with reference to a specific picture. In the present case the picture does give us a reasonably strong impression of the dizziness experienced when looking down from a great height. If it does that it has achieved its purpose and should be accepted as a perfectly legitimate piece of photography.

Data: Leica; 1/60th sec. at F:6.3 on E. K. Panatomic, in Champlin #7; no filter; E. K. P. M. C. #11 medium, in D-72. Print size 11 x 14".

Fifth Award
Amateur Class

■ Caricature is an extremely difficult field for the photographer and most observers are inclined to agree that it is a form of art which is best left to the free-hand artist. There is no harm in trying, however, and while we cannot say that this picture is really successful as a caricature, it is at least an interesting effort. The camera cannot distort or exaggerate to anything like the extent that is possible in free-hand drawing and since these elements are the very essence of caricature, the photographer is pretty much on the spot, so to speak, to begin with. Further the charm of a good caricature depends greatly upon the subtlety with which the exaggeration is carried out, and the camera is inclined to be clumsy rather than subtle in this field. All of these difficulties are evident in the present print. To speak specifically of this picture, we would remove the large swastika in the upper left for two reasons. First it offends against subtlety. There are already plenty of such insignia in the picture to more than carry the point. Second it results in an awkward composition because the four principal points of interest now occur at the four corners of a rectangle, resulting in an arrangement that is too mechanical, and consequently not pleasing.



"Distorted Power"
G. D. Aydlett, Norfolk, Va.

Data: 9 x 12 cm. Welta; 15 cm. Schneider Xenar F:3.5; 1/10th sec. at F:8, on Agfa Plenachrome in D-76, by one photo-flood; paper positive and negative on Dassonville Charcoal Black Grade F; final print on E. K. Opal Z, in D-72. Background opaqued out on negative. 11 x 14" prints on 16 x 20" mounts may be obtained at the price of \$10.00 upon application to Camera Craft. Prints will be exchanged with other prize winners in these competitions only.

Monthly Competition

Scoring for Club Trophy Cups

The following won points for their clubs in the Advanced Class: Karl Emery, for the Baltimore Camera Club; Ralph Rex, for the Camera Clique; Ante Kornic, for the Foto Klub Ljubljana; Glenn D. Beer, for the Los Angeles Camera Club; and Mrs. Christine B. Fletcher, for the Photographic Society of San Francisco.

The following won points for their clubs in the Amateur Class: O. E. Longtin, for the Fresno Camera Club; G. D. Aydlett, for the Norfolk Photographic Club; G. Raymond, for the Oklahoma Camera Club; and Van F. Dunlop, for the Riverside Camera Club.

The following prize winner has no club affiliations: H. W. Wagner.

Contributing Clubs

Aluminum Camera Club (New Kensington, Pa.)	Humboldt Camera Club (Eureka, Calif.)
Boulder Lens Club (Colo.)	Kamera Kranks Klub (Durham, Calif.)
Camera Clique (St. Louis, Mo.)	Los Angeles Camera Club
Camera Club of Richmond (Va.)	Miniature Camera Club of Oakland (Calif.)
Camera Guild (Larchmont, N. H.)	Nassau County Camera Club (Mineola, N. Y.)
East Bay Camera Club (Oakland, Calif.)	Norfolk Photographic Club (Va.)
Fort Dearborn Camera Club	Oklahoma Camera Club (Oklahoma City, Okla.)
Foto Klub Ljubljana (Yugoslavia)	Photographic Society of San Francisco
Fresno Camera Club (Calif.)	Riverside Pictorialists (Calif.)

Standing of Clubs

Large Clubs Advanced Class

Photographic Society of San Francisco.....	6
Fort Dearborn Camera Club.....	5
Foto Klub Ljubljana	5
Miniature Camera Club of New York.....	2
Los Angeles Camera Club.....	1

Small Clubs Advanced Class

The Camera Clique.....	6
Baltimore Camera Club.....	4
East Bay Camera Club.....	1

Large Clubs Amateur Class

Golden Gate Miniature Camera Club.....	4
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Small Clubs Amateur Class

Oklahoma Camera Club.....	7
Riverside Pictorialists	4
Washington Pictorialists	4
Fresno Camera Club.....	3
Norfolk Photographic Club.....	1

(Continued from page 89)

Data: 3 x 4 cm. Makinette; Plaubel Anticomar lens; 1/50th sec. at F; E. K. Panatomic in Perutz Fine Grain developer; two time yellow filter, in December; Agfa Brovira in M.Q. 7 x 9" or 30 x 40 cm. (12 x 16") prints may be obtained at the price of \$3.00 and \$15.00 respectively upon application to Camera Craft. Print size 7 x 9".

SUMMARY OF COMPETITION RULES

1. Open to all, amateur or professional, club member or non-club member.
2. Closing date 4th of each month.
3. Place technical data, club membership if any, selling price, and whether or not you wish to exchange on back of print.
4. No entry fees or blanks required.
5. Stamps must be enclosed for return of prints.
6. Full explanation will be sent free on request or may be seen on Page 44 of Jan. 1937 issue.

Club Notes

Mortensen Courses in San Francisco

"We are now able to confirm the tentative announcement made in **Club Notes** for January, that Mr. Mortensen will carry out his intention to give his personal training to students in the Bay area, when a very small minimum enrollment requirement is met. Students enrolling at once can insure themselves individual training; later enrollees may be obliged to double up in classes of two or three.

"Enrollment may be made direct with **Camera Craft**, with the California Camera Club at 45 Polk Street, or direct with William Mortensen, at Laguna Beach, California. Initial installment is \$25.00; the balance of \$100.00 on or before February 20th, 1937.

"Those enrolling are entitled to compete, free of charge, for a free scholarship, by turning in their pet prints to be judged according to the method described in Mr. Mortensen's article, "Trial by Jury", in December **Camera Craft**. Each contestant may turn in one print only for judging, and the size should be 11x14". Winning contestant will receive back his \$125.00 tuition fee, a complete Mortensen Library, and a year's subscription to **Camera Craft**. The Library will consist of **Projection Control**, **Pictorial Lighting**, **Monsters & Madonnas**, and the new book which will be off the press in March, **The Model**. Second prize will be the Library and the Camera Craft subscription. The instruction will be through the facilities furnished at the California Camera Club.

Prints Wanted

Ed Wolff & Associates, advertising agency for Wollensak Optical Company, would like to receive prints of negatives made with Wollensak lenses for use in advertising and catalogs.

Subjects: Child studies, portraits, groups, commercial shots, wide angle, action, nature studies.

Prints selected for use will be purchased. Unused prints will be returned if return postage is inclosed with prints submitted.

Mail prints to: Ed Wolff & Associates, 428 Taylor Building, Rochester, New York.

Passing of Mary Louise Alcock

Few men in this country have more photographic friends than William A. Alcock. We know that this host of friends joins us in extending sincere sympathy to "Billy" Alcock upon the death of his mother Mary Louise Alcock, who passed away on December 28th at the age of eighty-six.

Announcing Pictorial Photographers of America 4th International Salon of Photography in Their 20th Anniversary Year

Entry forms have gone out for a most comprehensive and broad exhibition of photography and the closing date is March 4th, 1937. It is sponsored by the Pictorial Photographers of America and will be held in the big Education Hall of the American Museum of Natural History, New York, from March 29th through April 17th.

This salon is unusual in that it is divided into five sections covering different uses of photography but the most radical departure is the separation of conservative and modern pictorial photography, having a separate three-man jury for each. On the entry form each section is defined and its respective jury given.

At the head of the plan is a Salon Committee made up of men who stand high in their respective fields, some of whom head the jury for their Section. The Sections start with No. 1, Pictorial Photography, having Dr. D. J. Ruzicka, Robert A. Barrows and Thomas O. Sheckell as its jury and including the accepted, conservative pictorial photography. Section No. 2, listed only as photography but defined as "... Any use or school of photography by an individual following his own dictates as opposed to the tradition of painting or other medium. Some of the schools coming under this Section are known as 'F-64', 'Pure', 'Basic', 'documentary', 'candid camera', etc." The jury for this Section is

CAMERA CRAFT

Anton Bruchl, Willard Van Dyke and Ira Martin.

Others Sections are Illustration, which includes photography for advertising, magazine and publicity pictures of industry, aerial, theatrical, sports and architecture. The jury for this Section No. 3, is Vaughn Flannery of Young and Rubicam, LeJarin Hiller the pioneer of photo-illustration and William M. Strong of Batten, Barton, Durstine and Osburn. Gardner Cowles, Jr., of Des Moines, Iowa, nationally known newspaper man is the committee member for press photography and Charles Stieglitz of the Scrips-Howard papers is the jury. Committee member for the Scientific Section is Harold Edgerton of the Mass. Institute of Technology and the jury is Dr. George H. Sherwood of the American Museum of Natural History for Natural History, John Bloomfield of the New York Museum of Science and Industry for Mechanical Science and Louis Schmidt of Rockefeller Institute of Medical Research for Medical Science.

One or all Sections may be entered by a contributor with but one entry fee, using a separate entry form for each Section entered and shipping the segregated Sections in one package.

Contributors who are registered in the P.S.A. four-print exhibition plan may only

enter a total of four prints in the combined pictorial sections Nos. 1 and 2. Other sections may also be entered but such prints will not be counted as pictorial.

The closing date is March 4th, 1937 and the exhibition is open from March 29th through April 17th at the American Museum of Natural History, Central Park West at 77th Street, New York City. For entry forms and information address William J. Lane, Sec.-Treas., 123 William Street, New York.

New Club

In Waterbury, Connecticut, a group of amateur photographers have met and formed an advanced camera club. The organization meeting was held Mouday evening, December 14, 1936, and the following officers elected:

Henri Scott, President
Ben Benson, Vice President
Arthur Rosengrant, Secretary
E. R. Hosmann, Treasurer

The organization is known as The Brass City Camera Club and has established permanent quarters in the Steele Building, 51 West Main Street, Waterbury, Connecticut. Anyone who is interested in communicating with the club or receiving information regarding same is asked to address Mr. A. N. Rosengrant, 131 Rosette Street, Waterbury, Connecticut.

Notes and Comments

Our Cover Picture

The original of our cover picture is an 18 x 24" print enlarged from a Leica negative. We are particularly impressed with the perfection of modeling and gradation which has been achieved in this print. The picture is reproduced through the courtesy of Spindler and Sapppe, Leitz agents for the west coast, who sponsored the showing of the Second International Leica Salon, in San Francisco, of which this picture was a part. It is interesting to know of the method which Mr. Person uses in making many of his prints. He first makes

a weak compensating negative. If the original negative tends toward too much contrast the compensative negative is made soft, and vice versa. The weak compensating negative is then bound in contact with the original negative and the two printed as one.

Courses in Coloring

The Modart Studios, P. O. Box 607, Trenton, N. J., offer correspondence instruction in coloring photographs, and supply a free outfit for beginning the work to each student. Full information as to the methods of instruction and the cost of tu-

ition may be obtained by writing to the above address.

Portraits Wanted

Owners of striking portraits are offered an opportunity to sell prints or the original negatives, for advertising use. Ed Wolff & Associates, advertising agency, 428 Taylor Building, Rochester, New York, are in the market for portraits of either sex, in a range covering infancy to old age. Subjects submitted should be well above the ordinary and accompanied by return postage. Price of print and price desired for negative should be quoted. Legal release of photo for advertising use will be required if purchase is made. Adequate payment will be made for truly artistic and acceptable portraits.

Wm. J. Grace Products

Mr. Grace is a gentleman who has made it his business to design and manufacture handy accessories for still and movie camera users. His fast growing organization has just issued a booklet which fully describes and illustrates the several items which they are offering, among which are: the Beltipod, Strongbox Humidors, Photo-flood Hilo Power Center, Tripod Socket for the Argus Camera, Safety Neck Cords, Chain-O-Pod, and Filmindex. Write to Wm. J. Grace, 4064 Stanford, Dallas, Texas, for your copy of the booklet immediately.

High Sensitive Photo-Cell

Under the trade name of Electrocell, a new highly sensitive photo-electric cell has recently come on the market which can be used to great advantage in devices for measuring low levels of illumination, for determining the density of negatives, etc. Electrocell elements are used in a great many commercial exposuremeters as well as in several cameras comprising built-in exposuremeters.

The sensitivity of Electrocell elements is several times as high as the one of previous cells of this kind. They, therefore, allow to take more accurate readings and to measure light at the lowest values of illumination. They come in a great variety of sizes and shapes, round shapes ranging from $\frac{3}{8}$ " to $2\frac{3}{4}$ ", rectangular shapes being available up to $1\frac{1}{2}$ " x 2".

Electrocell elements are claimed to be permanently stable and have unlimited

life. They are obtainable either mounted in a bakelite casing or unmounted, the active element having the appearance of a plain coin-like metal disk.

Distributor for U.S.A.: Dr. F. Loewenberg, 10 East 40 Street, New York City.

Bargains

The Wolk Camera Co., 335 So. Dearborn St., Chicago, Ill., announce the publication of a bulletin entitled "Bargain Scoop" which lists and describes the many valuable bargains which this firm is now offering. A postcard to the above address will bring the bulletin to you free of charge.

Learn To Color Photographs

The National Art School, Inc., 3601 Michigan Ave., Chicago, Ill., offer instruction in the pleasant work of coloring photographs in oils. You may learn to do this work quickly and well either as a hobby or as a means of adding to your income by part or full time work. A postcard sent to Dept. 5462, at the above address will bring you a free copy of the booklet "Making Money At Home", which is issued by the school.

Counter Light Cap

An extremely efficient lens shade is the one offered by Hugo Meyer & Co., 245 West 55th St., New York, N. Y., and known as the Counter Light Cap. Unique feature of this shade is that its spring actuated cover projects outward in use and may be revolved to any position to increase the effectiveness of the protective action. Available for all lens sizes. For full information write to the above address.

Salon Print Mailing Containers

Anyone who has had much experience mailing exhibition prints about the country is more than likely under the impression that the post office hires a crew of specially trained 300 pound huskies, whose duty it is jump vigorously up and down on each package of photographs just to make sure that they are securely wrapped. One way to fool these lads is to obtain a supply of Salon Print Mailing containers from James T. Lynch, 303 So. Cincinnati St., Tulsa, Okla. The containers will accommodate 6, 16x20" mounted prints and cost \$.75 each, 6 for \$4.00, or 12 for \$7.50. Special prices are offered to Camera Clubs purchasing in greater quantity.

New Boltavit Miniature Camera

Apparently there is no limit as to how small cameras may eventually be made for this new camera is the smallest yet measuring only $3\frac{1}{4}'' \times 1\text{-}11/16'' \times \frac{7}{8}''$. It uses 35 mm. film making 14 exposures on the daylight loading reel, the picture size being 24×24 mm., a square format. The camera is equipped with a Hugo Meyer F:3.5 lens of 40 mm. focal length in focussing mount, and a Boltur shutter allowing for speeds of 1/100, 1/50, 1/25, bulb and time. The camera equipped as above, plus a leather eveready case sells for \$25.00. For further information see the camera at your dealers, or write directly to Raygram Corporation, 425 Fourth Ave., New York, N.Y. for free descriptive literature.

Improved Kodak Retina Announced

Since its introduction early in 1935 the Kodak Retina has won the greatest respect and admiration of miniature camera addicts who had wanted a 35 mm. precision built camera at a reasonable price. Its versatility and fine work won their instant approval.

Now an improved Kodak Retina is announced by the Eastman Kodak Company and at the same low price (\$57.50) as the original model.

Foremost in the improvements is the adoption of the Kodak Anastigmat Ektar f.3.5 lens. This new super lens is ground with the greatest precision following a newly computed formula.

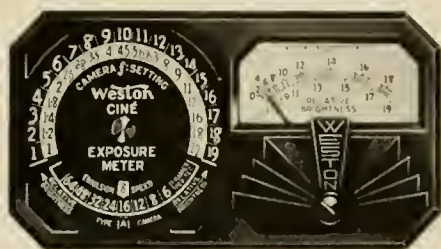
Notable for its critical definition even at full opening, the f.3.5 Ektar is said to produce excellent negatives. Not only have spherical and chromatic aberrations been reduced to a minimum, but the lens has a flat field and is unusually free from astigmatism. Generous enlargements which are amazingly sharp and rich in detail may be made from the negatives produced by this new lens.

The lens takes the screw-in mount Retina filters, N-1, N-2 and N-3, Kodak Retina Portrait Attachments A and B, and Kodachrome and other filters in the No. 17 slip-over mount.

The new model Retina is covered with tooled genuine leather and handsomely trimmed with satin-finished chromium which adds much to its smart appearance.

New Cine Exposure Meter Has 25 Deg. Angle and Simple Dial

Movie camera users, particularly those working with Kodachrome or other color films, will be interested in the newly designed "Model 819" cine exposure meter just introduced by the Weston Electrical Instrument Corporation, Newark, N. J. In this new cine meter, the "viewing angle" of the Photronic Cell is limited to 25 degrees, corresponding closely to that of standard movie camera lenses, which generally cover a more restricted field than do regular still camera lenses. As a result of the restricted viewing angle of the new meter, accurate exposure determination may be made from the camera position for a large majority of scenes.



Also, a new "pre-set" type of exposure dial permits the user to set the film speed, frames per second, etc., in advance, and read the correct aperture directly from the dial without turning a disk at the time the shot is being made. Despite this extra simplicity in use, other operating characteristics of movie cameras which affect exposure may be compensated for in "pre-setting" the dial, so that there is no sacrifice of accuracy in establishing the proper aperture. For example, certain cameras are known to have a greater angular opening of the shutter even though they operate at the same number of frames-per-second with the same type of lens. The effect of this factor on the proper exposure for similar scene brightness conditions is taken care of in a "pre-set" dial adjustment, which need be made only once so long as the same camera is used.

In the field, it is only necessary to note the "relative brightness" number shown on the meter scale, and use the aperture setting shown adjacent to this number on the exposure guide.

Bringing the field of view down to a 25-degree "solid angle" (in both vertical and horizontal directions) is regarded as an important achievement. With lenses having a smaller "angle-of-view", the meter still provides exact exposure results, as 81% of its response is determined by the scene area within a 10-degree radius from the center point of the picture. Thus possible errors in taking simple "average brightness" measurements from the camera position are limited to a few highly exceptional types of scenes. Naturally, the meter is equally suitable for "close-up" brightness measurements desirable when you wish to regulate exposure according to the brightness of some specific object within the scene area.

The new meter is similar in size and shape to the "Universal" type recommended for photographers who use both still and movie cameras.

Mirror Dodging

Owners of the Graflex Enlarg-or-Printer are well acquainted with the convenience and ease of making contact prints, enlargements, paper negatives—in fact, nearly every product of the darkroom—on one precision-built piece of apparatus. Now, for these owners and for all darkroom workers Graflex has made possible a new technique for local control during projecting printing. It is called Mirror Dodging—a technique that allows the operator to view the whole area of the enlargement during the actual projection of it—and in a reduced size so that the eye can easily take in the entire picture. It means more accurate dodging and more pleasing results.

This advanced method of local control is conveniently usable only with the Enlarg-or-Printer for no other popular-priced enlarging unit projects the image upward, making enlargements in the same way as a person ordinarily makes contact prints (and just as easily).

Mirror Dodging brings into play the newly developed and specially made convex Dodging Mirror for the Graflex Enlarg-or-Printer. This mirror is adjustable and always "in focus" no matter what size enlargement is being made. The entire detailed image is reflected up to natural eye level so that the operator can see exactly what happens every second as he

moves his dodging medium back and forth in the light stream. This mirror takes all the guesswork out of dodging. It is standard equipment on the Graflex Enlarg-or-Printer. Present owners may obtain one for attachment to their present units at Graflex dealers.

Graflex has simultaneously incorporated new features in its accessory extension top which is intended to be used with the Enlarg-or-Printer for making enlargements and contact prints in the larger sizes up to 11"x14". By fitting the new top with a switch—exactly like that on the Enlarg-or-Printer itself—that automatically controls the lighting as the owner operates the platen, this accessory is given new convenience and usefulness. It enables the owner to make the large, salon-sized enlargements and contact prints with the same speed and ease as the smaller sizes.

Also, Graflex has fitted this new extension top with a set of four adjustable, scaled masking blades to aid in composition, to facilitate uniform print borders and to hold the negative flat in contact printing.

The new top fits onto the Enlarg-or-Printer simply, easily and quickly. In fact, tests have shown that it can be attached and made ready for operation in less than half a minute.

Present owners may have their extension tops brought up-to-date with these new features through their Graflex dealers.

New 8mm Equipment from Abroad

Eight millimeter film, originally introduced to bring home movies within the reach of many who couldn't afford 16mm film, has now been so wonderfully improved that it is rapidly becoming almost standard for all personal filming as 16mm steps up into the field of industrial and business movies. In Europe the 8mm equipment is even moving into the very advanced amateur class with super models designed for the most elaborate cine work.

The Ditmar Camera

This English made camera is box form, 4½ x 4½ x 2½ inches. It comes equipped with a f 2.5 or f 1.8 regular lens with telephoto attachments available. Its finder is enclosed within the body of the camera and is made to correct for parallax so that

it will show the correct field when close-ups are taken. It runs at two speeds, 16 and 32 frames per second, and also has a truck crank whereby single frame exposures can be made. Regular 25 ft. rolls of double 8mm film are used. The camera is marketed in this country by Burke and James, 223 W. Madison St., Chicago, and sells for \$80 to \$90, depending upon lens equipment.

The Nizo Equipment

From Germany is imported a line of equipment comprising three models of cameras and three projectors for 8mm film. The Nizo 8 S.O. model is a "regular" model with 2.8 or 1.5 lens, one speed of operation. The model 8 E is a "special" with choice of three regular lenses: f 2.8, 1.5, or 1.3. It has three finders all built into its box shape, one for eye level viewing, another for waist level, and still a third for angle viewing for "candid" shots when the camera is operated with the photographer apparently looking in another direction. It has four speeds: 8, 16, 32, and 64 frames per second. The model 8 Z.D. is a "super" camera which can be fitted with any of the fancy devices such as wind back for double exposure and single frame stop motion work. All cameras can be fitted with telephoto lenses and all use double 8 film. Prices are from \$65 to \$220. The three Nizo projectors include two regular 8mm machines with different wattage lamps and a third model which is equipped to use three sizes of film: 8mm, 9½mm, and 16mm, by changing the film transport mechanism. The Nizo equipment is handled by Hans Unfried, 20 Camp St., Buffalo, N. Y.

New Foth-Derby with Range Finder

The Foth-Derby, in spite of its reasonable price, is a good camera, yielding the miniature photographer a high type of photographic performance. A new model incorporating all the advantages and refinements of the standard instrument has now been placed on the market. This model has an all cast metal body and is provided with a dependable, optically precise, built-in range finder. For further information, write Burleigh Brooks, 127 West 42 Street, New York.

The New Camera Shop

About February 1st, a new and very beautiful photographic store will open its doors in San Francisco. That is the premises will be new — the owners and managers have been friends of San Francisco photographers for years. This means that the Camera Shop, jointly owned by Herbert Luhn and Mrs. Alice Argus Brady, is moving from its present location at 145 Kearny St., to new quarters at 137 Kearny St., just a few doors up the street. The store will occupy more than four times as much space as formerly, in the new location, fixtures will be modern and up-to-date in every respect. There will be a most comfortable projection room measuring 10 ft. by 20 ft., and the stock will be greatly expanded to include an unusually complete line of supplies and equipment of all kinds. The marked success of this business has been built on the solid foundations of fair dealing and courteous service. Don't fail to treat yourself to a visit to the new store about February 1st.

Our Book Shelves

Sport Shots, by Dr. Paul Wolff. Published by William Morrow & Co., New York. 132 pages, 8¼ x 10¾", price \$3.00 cloth bound.

In this book the famous German miniature camera worker presents more than 150 of the most exciting and technically

perfect action and candid camera shots that one could possibly hope for. Here is the whole story of the Olympic Games in action plus vital candid portrait studies of many of the important personalities of the games. In the opinion of the writer this is easily the finest job of photographic re-

porting that has appeared in book form. The fine prints lose nothing of their snap and brilliance through the reproduction which is truly superlative.

In an extensive introduction Dr. Wolff tells of the equipment and methods which he used in obtaining these pictures and of the several difficulties which presented themselves and how these were met. The photographer who is interested in action work can pick up many a useful bit of advice from these pages, and from the pages giving technical data on each picture. The book also gives a complete tabulation of the results of each event of the games, listing first, second and third place winners and their nationalities. Though we followed the games with considerable interest we have never seen a complete tabulation of results such as this before. The photographer will find in this book a fascinating collection of fine pictures, the sports enthusiast will surely consider it a most valuable memento of the Olympic Games.

The Leica Annual. Edited by Henry M. Lester, published by The Galleon Press, of New York. 180 pages $8\frac{3}{4} \times 11\frac{3}{4}$ " spiral binding, \$3.00.

This book contains 160 pictures which have been selected from the several hundred which appeared in the first three Leica International Salons. The prints are nicely reproduced in Beck Gravure, and they most assuredly do give one a splendid conception of the variety and the quality of work that is being done with this particular miniature camera. Miniature photo-biographies on each of the seventy photographers shown, accompany the technical data on each picture and are a most interesting feature of the book. These plus an introduction by editor Lester constitute the text of the volume.

Shadowless Figure Portraiture, by Fred P. Peel. Published by the Galleon Press of New York. 111 pages, $8\frac{3}{4} \times 11\frac{3}{4}$ ", Wire-O binding, \$2.75.

In this book Mr. Peel describes in considerable detail the light and the system of lighting which he has used for some years in portrait and figure work, and which has come to be known as the "Shadowless Light". The light is doughnut shaped with a circle of lights in the solid

part of the "doughnut" with the lens of the camera pointing through the hole in the center. In a chapter on The Photographer and His Model, Mr. Peel explains his methods of dealing with models and the necessity of obtaining a release. There is much thought provoking comment in the chapter on Composition, but this section is of necessity rather sketchy since the subject can hardly be dealt with in so limited a space. Sixty-one pictures are shown in the Pictorial Section of the book and Mr. Peel writes a running comment on these that is both helpful and interesting. Few of the new pictures equal or surpass the high standard which Mr. Peel set for himself with such portraits as "Lady in White", or "Mrs. 'T'." or such figure studies as "Mural Section". Most pleasing new portraits in the opinion of this writer are numbers 2 and 20, and the most interesting new figure study number 43. We do not think that the attempts to create abstract designs from parts of the figure are entirely successful. We cannot see a clearly delineated design in any of these.

The book is completed with a chapter on negative development, a chapter on projection printing and a chapter on the construction of the various pieces of equipment used.

Alexander Keighley. Published by Die Galerie, of Vienna. American Agents, American Photographic Publishing Co., 428 Newbury St., Boston, Mass. $11\frac{3}{4} \times 12\frac{1}{4}$ " cloth bound, price \$4.00.

Alexander Keighley unquestionably stands among the most eminent of the romantic landscape photographers, so it is particularly fitting that this book should be published to preserve the beauty of his pictures in permanent form and to make them available to photographers and picture lovers in general. Twenty-four pictures are shown, beautifully printed and the volume itself is in every way a fine example of book making. A glance at any representative photographic exhibition today will quickly show that there are very few really capable photographers who are working in what we might call the "grand romantic manner" which Mr. Keighley so ably represents. Photography today, for the most part is moving in a different

direction, but the beauty of these pictures cannot fail to suggest to the open minded that there is much of real worth in the older tradition.

Photography, by Dr. C. E. K. Mees. Published by the MacMillan Co., of New York, cloth bound \$3.00.

Many books have been written on the art of photography, many on photographic technique and its applications, but in a book forthrightly named "Photography" it has remained for Dr. C. E. K. Mees, Kodak Director of Research, to provide in simple and popular style a general review of the whole subject.

This book, just published in this country by the MacMillan Company, is not only a mine of interesting information for the general reader but furnishes a complete background of knowledge for all who pursue photography, either as amateur or professional.

We find at the beginning the history of photography compact in one chapter. Dr. Mees, one of the greatest authorities on this subject, then deals in turn with the manufacture of present day photographic materials, modern photographic practice, the formation of the photographic image, the reproduction of tone values, cinematography, the reproduction of colored objects in monochrome and in color, and finally describes some of the widely differing applications of photography as in astronomy, the biological science, medicine and dentistry, timing horse races, and testing materials.

From the standpoint of the book's being a valuable work of reference, Dr. Mees here has put into print many facts in the historical development of photography not generally known as well as interesting facts about the industry, derived from his intimate association with those who during the past sixty years have been largely responsible for its growth, to say nothing of his own active participation since 1901.

Starting historically with the discovery—that silver compounds are sensitive to light—Dr. Mees gives a fascinating account of the development of photographic materials from the daguerretotype and calotype of 1839-51, through the wet plate era that ended in the seventies, the intro-

duction of dry plates, then of roll films, and finally to the supersensitive panchromatic materials in various parts of the world today, he tells us, requires annually some 500 tons of pure silver, 6000 tons of cotton for the making of film base, 3000 tons of specially prepared gelatin and 12,-500 tons of wood pulp for the production of photographic paper.

Motion pictures consume about half a million miles of film a year. Amateur photographers need about 1500 tons of film to make their snapshots and another 7000 tons of paper to print them on; professional photographers use about 8000 tons of film, 8000 tons of glass plates and 9000 tons of paper to make portraits and advertising features.

The reader particularly interested in the chemical aspects of photography will learn from diagrams and photo-micrographs as well as text, exactly how the photographic image is produced by the action of light and chemicals.

There is much useful information, too, for the amateur movie-maker; for example, a detailed account of the actual processing of motion picture film, and, in addition, some interesting and authoritative descriptions of the technique of motion picture production at Hollywood and of such professional studio business as **back projection**, the use of miniature sets and the creation of animated cartoons.

One of the most interesting and informative chapters is that on color photography. Starting with Clerk-Maxwell's color solution filters of 1861, the development of color processes both for "still" and "movie" photography is discussed, finishing with an account of "Kodachrome," the natural color film for amateur still and amateur motion picture cameras. Each of the various processes now in use is fully explained and in addition there are excellent diagrams in color.

"Thirty years ago, I found it hard to conceive that great improvements in the art of photography were possible," writes Dr. Mees. "Today I am certain that still greater improvements are imminent."

"Photography" is illustrated with many fine plates, including several in color and there is a carefully compiled index.

•• Classified Advertisements ••

OUTFITS FOR SALE

◆All brand new and at bargain prices. Contax III (built in exposure meter) with collapsible f2 Sonnar. Leica G with f2 Summar and everready case (U.S. Sockets and markings). 7 lens Leica universal case, Hektor 28mm. f6.3, Elmar 35mm. f3.5, Hektor 73mm. f1.9, Elmar 90mm. f4, Thambar f2.2 90mm. portrait, Hektor 135mm. f4.5 lenses, Vidochrome finder, Rsaichrom, direct view finder, Ayocoe waist finder, front lenses I, II, and III, yellow and green filters slip-on mounts. Communicate with I. C. Sugarman, 2715 Belrose Ave., Berkeley, Calif., Berk. 1008.

◆Leica Model C—F:2.5 Hector Lens, carrying case, cable release, very fine condition, \$60.00. Late model Weston Leicameter, \$10.00. W. Golden, Rm. 209, 830 Market St., San Francisco, Calif.

◆3A Graflex 7½" B & L Tessar F:4.5 lens. Good condition, \$25.00. F. E. Leinard, Bryan, Ohio.

STUDIOS FOR SALE

◆Third interest in well-known downtown San Francisco Studio can be purchased. Excellent ground floor location. Excellent opportunity for woman photographer. M. H. E., c/o Camera Craft, 425 Bush St., San Francisco, Calif.

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Model F Leica Elmar f:3.5, 50 mm., Everready case, brand new.

Special price \$135.00 each

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FOR SALE OR EXCHANGE

◆Portrait camera and stand, 8x10 view camera, case, holders; 5x7 Graflex, studio lamp. Consider small Graflex, spotlight, min. enlarger. Swanets Studio, Santa Rosa, Calif.

OUTFITS WANTED

◆3¼x4¼ Speed Graphic or Graflex D with or without lens and accessories. Must be bargain and in A1 condition. Merwin Jones, Radio KOOS, Marshfield, Oregon.

◆Contax or Leica and accessories, will consider Rolleiflex, or Zeiss Super Ikonta B, C or D. E. B. Williams, Box 176, Bald Knob, Ark.

LENSES WANTED

◆Hugo Meyer Plasmal Lens, 7½ to 8½ inch. Also. Wide Angle, about 4½ inch focus. C. L., 445 Sixth St., San Pedro, Calif.

POSITIONS WANTED

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The Six Phases Of Control

William Mortensen

The Outline of a System

IT IS the purpose of this article to give a more definite continuity to other articles, and particularly to the several books, already written and published by Camera Craft*, on three of the six phases of control herein enumerated; also to point the way to the books yet to be written, covering the other three phases. It is hoped also that I shall here answer some at least of the innumerable questions which have reached me from India to Indiana regarding the relationships of the factors in my system of Pictorial Photography.

Obviously it would be impossible, even with all good wish and intent, for me adequately to answer all these inquiries. Up to this time, the only source of information outside of my publications has been the numerous students who have studied directly with me. Unfortunately in some cases the information that the public has received in this way has not been strictly accurate, because it has been colored by the student's own temperament and taste.

In the first place, let it be understood that my photographic system is a concatenated one, no part of which will stand by itself, and that, though

*Two of Mr. Mortensen's already published works deal directly with two of the six phases of control; **Projection Control** (1934) and **Pictorial Lighting** (1935). A third, **Monsters & Madonnas**, is a book of methods touching on all of these phases. His fourth book, **The Model**, (1937) is announced in this issue. Thus complete data on three phases of Mr. Mortensen's system of teaching photography have now become available, with a great deal of material on the other three phases, as they necessarily intermingle in practice and in teaching.—Ed.

DATA FOR FRONTISPIECE: "Brise de Mai"

Data. Camera. Soho Reflex $3\frac{1}{4} \times 4\frac{1}{4}$. Lens. 15 cm. Zeiss Tessar. Exposure. Approximately $\frac{1}{5}$ second at F 8. Film. Eastman Verichrome Film Pack 1936. Camera Distance. Approximately 15 ft. Lighting. Modified Basic. Developer. Borax Metol. Time of Development. One and one-half hours. Projection Control. Framing, montage, dodging in. Printing Paper. Semi-mat. (normal). Print Developer. D 64—B solution. Treatment of Print. Abrasion & Powder Tone.



Fig. 1

each part must be understood in relationship to the others, it is in itself sufficiently unified so that it can be separately studied and practised.

So, while I have been gratified by the marked improvement in the work of many along the lines covered in my books published previous to 1937, and have great hopes for further such results from the one now just being released, yet it should not be expected by any student that merely by mastering one or two phases of my system can he expect to obtain a well-rounded understanding of photographic procedure.

Each of the books so far published, and each of those to follow, if correctly understood, is as definite in application as *Pictorial Lighting*; and, like *Pictorial Lighting*, each must also be understood in the light of its function in the complete system.

In this article I will outline the six phases in this system, and indicate their relationship to each other, as follows:

First, *That which is before the camera* (model, landscapes, architecture, machinery, animals, still life)

Second, *Lighting*

Third, *Negative Quality*

Fourth, *Projection Control* (framing, local printing, distortion, montage)



Fig. 2

Fifth, *Abrasion & Powder Tone*

Sixth, *Processes* (of which I advocate and teach two; Bromoil Transfer and Paper Negative)

That Which is Before the Camera

We take pleasure in divers types of subject matter—a maple leaf on its stem, a spider web drenched with dew, a flight of geese, an intimate study of a calf scratching itself on a fence, three potamides tentatively slithering among the kelp, or the aftermath of a gangster killing. All these and more—in variety as infinite as the caprice of woman—models and subjects to fit the predilections of any and all who can point a camera and snap a shutter.

Because of this embarrassment of riches in pictorial material, many a palpitating amateur who stands poised to point his camera and snap his shutter finds himself rooted in a desperate indecision, born mostly of his inability to recognize a picture when he sees one.

As my particular interest lies along the line of portraiture and character studies, I have chosen a human model as the object to put in front of my camera. Those of other tastes may substitute as they desire, a maple leaf, a skyscraper, an egg-beater, or a mothball.



Fig. 3

The model of my choice is shown, first, merely as herself; a model of the intelligent "co-operative" type. (Figure 1.) By using the methods of control available in dressing and posing this model, and in providing a suitable background, I take the first step in the creation of a picture which will hold a more urgent appeal for the beholder than the mere photographic record of an interesting face.

Lighting

The second factor which is intimately related to the representation of the model is *lighting*. Figure 2, therefore, represents my studio with the two 500-watt units placed in position for the Basic Light. This arrangement of the units yields a light area in the principal image of the same luminosity as the adjacent portion of the background.* This lighting is best suited to direct representation of the subject on its own structural merits.

Negative Quality

The third of the six vital factors is *Negative Quality*. This is a subject that is so closely related to the other factors that it has been necessary to

*Pictorial Lighting, Chapter 3.



Fig. 4

touch upon it in both *Projection Control* and *Pictorial Lighting*. It is so important a matter that it must eventually receive more thorough treatment.

The two traditional virtues of the negative are gradation and definition. These qualities are equally important to the pure photographer and the control worker. Definition is the result of a sharp objective and critical focus with higher stop. Gradation is the result of perfect exposure lying toward the toe of the H and D curve. There must be present, *for purposes of projection*, a high gamma, which is the result of prolonged development.

Note, however, the essential difference in attitude toward the negative. To the purist the negative, with its unembellished contact or bromide print, constitutes the supreme accomplishment; while to the control worker it furnishes only the point of departure.

Figure 4 is a direct enlargement from negative in Figure 3, without the use of spotting or any of the control methods that will be hereafter mentioned. It is, in short, the pure photographic rendering of the subject.

Projection Control

We therefore come now to *Projection Control*, the fourth of the six vital factors. In the course of projecting the negative (Figure 3), it is possible by numerous procedures and devices to eliminate, emphasize or exaggerate features of the subject, and also to control tonal values and relationships.

It is in this elimination and this build-up that *creative* photography begins. In the controls used lie not only the opportunity for photography to become a legitimate medium of beautiful, individual picture making, but they furnish also the fascination and the satisfaction of individual expression on the part of the worker.

Certainly the worker who desires to incorporate personality, individuality and the evidence of creative ability in his pictures, must go beyond the mere mechanical process of making direct contact or enlarged prints from his negative.

These control methods do not in any way partake of the mushy or wooly effects of the long soft-focus lens, nor in any way offend against the photographic image.

In making the print (Figure 5) from the negative (Figure 3), the following procedures in projection control were employed:

1. With the Aperture Board an additional half-tone quality was given the entire flesh area
2. By the same method, the white blouse was given additional half-tone gradation
3. Also with the aperture board, the eye orbits were slightly lowered in tone
4. Slight dodging in.

Abrasion and Powder Tone

Figure 5 likewise illustrates the further control secured by the application of Powder and Abrasion. By these procedures the following "refinements" were achieved:



"On the Shore"

William Mortensen

Fig. 5

1. High lights were intensified on the hair, forehead, cheeks and chin, and some portions of the blouse
2. Whites of the eyes were intensified and high lights corrected in the iris
3. The contour of the lips was altered, and they were lightened in tone
4. Structure of the breast and neck improved
5. Elbow rounded
6. Eliminated tear in upper edge of blouse
7. Darkened traps in hair

The Abrasion and Powder Tone method, while an extremely simple one in demonstration, is of such a nature as to require more than a cursory description in print. The author hopes that *Camera Craft* may afford him an opportunity of fully describing this procedure, in book form. However, this is essentially a process for the finishing of the print, and it seems reasonable that before the finishing of the print can take place, the negative must first be perfect. To date, I have not had the opportunity to fully describe my procedure for securing negative quality. This subject, with the bromoil and Powder Tone, seem equally to demand attention. Data on all these procedures will be provided as fast as is humanly possible.

Bromoil Transfer and Other Processes

So now we come to the sixth vital factor—the *Processes*. Through the facilities of control afforded by these processes, photography has realized itself as an established creative medium.

Among these processes we may mention carbonyl, fresson, gum-bichromate, bromoil, bromoil transfer, paper negative.

The last two are the ones to which I personally am addicted. The present study (Figure 6) is a bromoil transfer.*

Here we observe that we not only have obtained all that the abrasion and powder tone has given, but:

First, Background, consisting of clouds, sea, sail, etc., has been added

Second, Additional modelling has been given to the breasts

Third, Parallel folds in the blouse have been broken

Fourth, Ornament on upper arm has been eliminated

Fifth, Rendering of hair has been improved, and it has been lengthened on left shoulder, thereby eliminating the cul de sac in Figures 4 and 5.

The picture has therefore become a personalized creation, utilizing all that the photographic process can give, and without in any sense violating the image itself.

The superb quality of the Bromoil Transfer is the finest process yet invented for taking the photograph out of the class of the purely mechanical and giving it the truly exquisite characteristics of a lovely work of art.

*Note that the image has been reversed in the process of transfer.



"On the Shore"

William Mortensen

Fig. 6

Pictorialism

For Beginners

Harold G. Grainger, A.R.P.S.

Part VII: Combination Printing

DESPITE remarkable improvements in emulsions which have latterly proved so helpful in the easier production of camera-pictures, a good deal of combination printing is still done by keen pictorialists. The majority, it is true, go no further than the comparatively simple operation of adding cloud forms or tones to represent blue or gray sky, from a separate negative, to make more presentable an otherwise pleasing subject. The few, on the other hand, who do not hesitate to employ portions of three or even four negatives to build up, from their point of view, one really satisfactory picture, must necessarily possess, in addition to exceptional manipulative skill, not only a sound knowledge of art principles but a proper appreciation of Nature in her various moods.

It is undoubted that combination printing provides, to those who have the urge, excellent opportunities for putting pet views or theories into practice; but it should never be forgotten that eventual success in pictorialism is largely dependent on the care expended to avoid the incongruous or irrational. The aim should always be such co-ordination of each portion of the selected negatives that the picture, when completed, possesses such qualities as will ensure freedom from adverse criticism by competent art critics or those with meteorological knowledge. Unless, indeed, it carries with it the stamp of naturalism, its exhibition will do more harm than good to the reputation of the producer.

As already mentioned the inclusion from a separate negative of appropriate cloud forms, into, for example, a landscape subject, is the simplest essay in combination printing. Whilst some may object that this is not admissible in picture making because, as they think, whatever was provided by Nature when the subject was taken, must therefore be the best;

the majority of thoughtful people recognize that anything that can be done to improve a subject—so long as natural laws are strictly adhered to—is not only admissible, but advisable. However naturally beautiful any sky might be which happens to be present when a subject is taken, it is only now and again, where serious picture making is the aim, that it can be regarded as the most helpful to the composition.

Essentials Which Must Be Observed in Combination Printing

As the laws to which reference has been made may be said to regulate all one's efforts in combination printing, their observance is imperative if one's pictures are not to be ridiculed or held in contempt by those with more knowledge. Neither difficult to remember nor carry out in practice, they comprise, where, say, two separate negatives, comprising (1) a landscape and (2) cloud forms are being used for one print:—similarity in weather conditions; period of year; time of day; angle of illumination and co-incidence of horizons. In addition, definition of component parts must be suitably related to each other. If, for instance, in accordance with the general practice of experienced pictorialists, differential or selective focusing was employed when the landscape was taken it will be obvious that the definition of the added cloud forms should be, to assure the appearance of remoteness, definitely subdued or soft in character.

Let the reader now look through his prints and select for analysis, let us say, a landscape subject. Examining the print critically and with an earnest desire to produce from the negative a rendering conformable to art principles yet withal strictly within the limits imposed by a correct observance of natural laws, the question might be asked—can it be bettered? Are the sky-tones, for example, correct in strength and harmonious with the rest of the subject? If not, to the understanding critic, the rendering will be considered faulty; in the opinion of the selection committee of most salons, it will be unworthy of acceptance for exhibition.

These points are stressed because the sky is, excepting in rare instances, amongst the most effectual parts of the composition. It is no exaggeration to state that it provides the key-note, the standard of scale, as it were. Artists generally regard it as the principal sentiment in a landscape, for is it not the source of light? Even when it only occupies a relatively small portion of the composition the paramount importance of the sky is not reduced. It has been said with truth that though rocks, trees, mountains, plains and waters are the features of a landscape, its expression, whether tranquil, sad, bright, etc., comes from above.

It is a useful simile to look upon the sky as the natural background of the landscape and therefore, though apparently too often the case, it should not be regarded carelessly. Apart from the infusion of naturalness which may be otherwise lacking in the representation of a scene, the judicious inclusion of sky tones from a carefully selected separate negative gives scope for emphasis or concentration of interest on the principal object. A further and very useful advantage is the opportunity to secure better balance, by introducing lines at opposing angles where, as not infrequently happens, the chief lines of a landscape run too much in one direction.



Fig. 1



Fig. 2

Making a Combination Print by Enlargement

For exhibition purposes it is usually most convenient to make one's pictures by projection on bromide or chloro-bromide papers in an enlarging lantern, a method the writer finds particularly suitable for the inclusion of clouds or sky tones from separate negatives. For this a mask to allow the image from the cloud negative to be introduced just where required and nowhere else is necessary. From long practical experience of many different materials I find celluloid ideally adaptable for this and my preference is for the kind combining matt and glossy faces not less than 10/1000ths of an inch thick. Not only does this assure a firm, satisfactory base but the matt surface is so convenient for pencilling that whilst the blending of the images of the two negatives defies detection there is a slight diffusion of outline in the cloud forms which helps the effect of remoteness. A great consideration too is the fact that the prepared mask is just as suitable for glossy papers as for those with rougher surfaces favoured by pictorialists for broad effects.

With the method about to be detailed the writer believes that, providing reasonable care is exercised, none need be nervous about attempting the preparation of a combination print. Success is certain if this well-established rule is kept in mind. To ensure quality in any print produced by development methods, exposure should be just sufficient to secure desired strength of image in about $2\frac{1}{2}$ to 3 minutes in one or other of the usual solutions at average temperature. As exposures are made from both negatives before the enlargement is developed it will be obvious that these should be ascertained beforehand.

Let us assume the making of a combination enlargement on bromide paper from two negatives, landscape and clouds, prints from both of which are herewith shown. (Fig. 1, Fig. 2.) After focussing the landscape negative to the size required precautions were taken to obviate subsequent enlarger or easel movement. This was essential as otherwise the celluloid mask, when prepared and ready for use, might not have fitted the projected image of the landscape correctly, which it must do during the exposure for the clouds.

The mask was prepared as follows: With the landscape negative in the carrier a piece of celluloid a little wider than the projected land-



Fig. 3

scape image and sufficiently long to accommodate fully the whole of the sky, was corner-pinned (with white paper behind) to the easel, matt surface outwards. Then, on the celluloid, with a fairly soft pencil, an indication of the sky-line was carefully drawn, avoiding during the pencilling the interstices amongst the foliage through which the sky was visible. When this had been done the celluloid was removed from the easel and the mask finished as illustrated by shading in the upper portion—pencilling smoothed off with a paper stump, (used by students in art schools) and attaching to the lower a piece of black or other dark paper to protect the rest of the landscape from light action during the exposure for the clouds. (Fig. 3).

Correct exposure for both negatives had, of course, to be ascertained before the combination print was attempted. The writer considers it best to accommodate the lens aperture to an exposure of about 60 secs. for the landscape as this gives opportunity to exercise control over tone values—the reduction or increase of exposure in selected portions for pre-determined pictorial effects. In addition, when two negatives are employed in the preparation of one print, there is no uncertainty about the exact exposure necessary, if it is fairly prolonged, for each being given.

These were easily found by trial—give, on a strip covering a section of the subject combining high light and shadow, four different exposures; as for example at F16 on the landscape under review (see illustration Fig. 4)—15 secs. for the whole of the strip, another 15 with the first quarter covered; a further 30 with one-half covered and finally 60 more for the last quarter. On the one piece of sensitive paper were therefore exposures of 15, 30, 60 and 120 secs. respectively. The exposure for the cloud negative was ascertained similarly but, this being much thinner because more delicate



"An Ancient Farmstead"

Finished Print

Harold G. Grainger, A.R.P.S.

in gradation, the lens was stopped down to F32 and 5, 5, 10 and 20 secs., aggregating 5, 10, 20 and 40 secs. respectively, were given through the celluloid. Both trial strips were developed together for 3 minutes (previously indicated as advisable for complete development of the image) and it is generally possible to appraise from their appearance correct exposure for each negative at the lens apertures employed.

The procedure for making the combination enlargement was as follows: With the landscape negative in the carrier the ascertained exposure was given. Then, with the orange cap on the lens, the celluloid mask was, following careful registration with the projected image, pinned to the easel in front of the bromide paper. It was then necessary to withdraw from the carrier the landscape negative and put in its place the cloud negative. Whilst this, as also the adjustment of the lens aperture to the requirements of the cloud negative (F32) received attention, a large card placed in front of the easel kept the bromide paper free from risk of fogging when the negative carrier was withdrawn from the lantern body. If electric light is the illuminant this can be switched off whilst the negatives are being changed. Before proceeding with the exposure for the cloud forms the horizon of the cloud negative was regulated in conformity with that of the landscape, by dropping the lens panel of the enlarger. Following exposure, the resulting enlargement (entitled "An ancient Farmstead") was developed, rinsed in water, fixed and washed in the usual manner.

It may be that examination of the first enlargement will disclose the need of a little attention, here and there, to the shading on the celluloid



Fig. 4

to secure a perfect blending of the tones of the two negatives. A slight darkening of some parts, or reduction of the strength of others (by the use of a soft india rubber) will probably be all that is necessary to obtain such a linking up of the two images as will assure a perfectly satisfactory result.

One or two suggestions may be acceptable to some readers. The possession of a number of cloud negatives made the horizontal way of the plate or film, as free as possible, from trees, houses, etc., breaking into the sky but including a narrow strip of landscape, are likely to be of great advantage. If, in addition to being taken at different times of the day, they vary in angle of illumination, there is a greater probability of finding one exactly suitable when required. They are more useful if subdued in definition for, used in combination with a landscape the distant parts of which are not crisply defined, it would, as already shown, be irrational to have sharp cloud forms.

Exposure for clouds is usually about 1/10th of what is correct for an average subject. Panchromatic emulsions, with or without a screen according to circumstances, are generally to be preferred. Over-development should be avoided as this induces excessive contrast. Dramatic skies are not, as a rule, the most appropriate for combination printing; they are apt to dominate and therefore "steal the thunder" of the subject itself. When exposures are made note the position of the sun in relation to the clouds for transference to the back of a couple of contact prints,

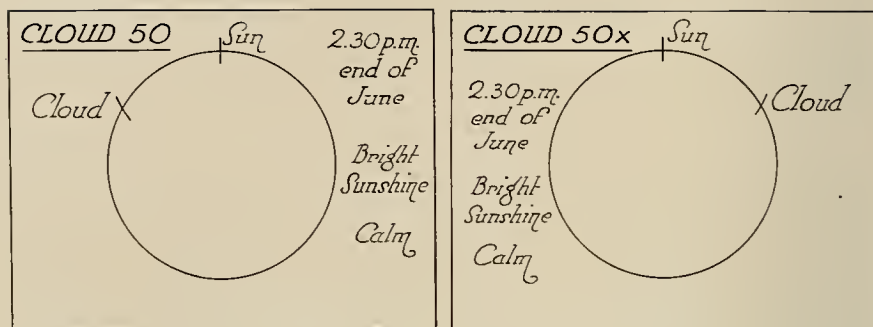


Fig. 5

(see diagram Fig. 5) one from each side of the negative. Give each a number with an X in addition on those printed from the reverse side. Indicate also time of day, month and weather conditions, for in combination printing it is imperative that such data be identical for both negatives.

Whilst the chief interest in a picture is generally to be found in the foreground, the sky, it should never be forgotten, must always be in harmony with every part of the subject.

Extreme Close-Ups With A Miniature Reflex

John J. Haruff, M.D.

THE twin lens type of miniature reflex camera is rapidly growing in popularity. Rightly so, for the precision in manufacture and the excellent lenses and shutters provided are shown in the excellent quality of pictures produced. Most of all, the brilliant image on the ground glass shows the future picture full size and the accuracy of focus up to and during the actual exposure. The operating expense is small; the film is inexpensive and in a size obtainable anywhere. A wide choice of emulsions is available. While the size is one not necessarily requiring enlargement, quality enlargements will result from the excellent definition produced. The versatility of these cameras is greatly increased by the line of accessories available. The most versatile camera in use today, I believe, is the old standby, the double extension, ground glass back, folding camera which uses plates, packs or cut film. While it has one advantage

over the twin lens reflex—the double extension feature—it has many disadvantages, namely, greater bulk, greater weight, greater film cost, and is more time consuming and troublesome if ground glass focusing is resorted to. The latter is necessary if copying or extremely close-up work is being done. Yet with a twin lens reflex and supplementary lenses we find the answer to the disadvantages of both cameras. With the equipment about to be described a twin lens reflex can be focussed sharply at every inch from six or seven inches to infinity. This can be done at snapshot speeds with the camera held in the hands with the same confidence as to the outcome of the picture as one has with any ordinary exposure. One need not be bothered about tripods, changing backs or worrying about exposure factors which is necessary when double extension is used. The exposure with a supplementary lens is the same as without the lens, as there is no alteration of the lens film distance. This means that the picturing of small objects becomes as simple as possible, the operation being the same as for ordinary large objects. Simply trip the shutter when the object is sharp on the focusing screen. This is valuable to the entomologist, botanist, surgeon, model builder, table top photographer and others interested in getting pictures of a small object, perhaps alive and moving, in the simplest possible manner. The advantage of the short focus lens is obvious not only in the greater depth of focus but in that this greater depth of focus permits larger apertures and consequently higher speeds. The equipment described represents an outlay of not over a dollar and a half for five pair of auxiliary lenses.

You guessed it. Spectacle lenses of the "dime store" variety. They have been mentioned on these pages before. The glasses are obtained at one of the chain stores at prices ranging from fifteen to fifty cents a pair. You will find different lines at the different stores—some of better quality than others—even at the same price. However, I have had no difficulty with any and I have purchased dozens of pairs from a half dozen different chains. You will find some of these lenses of the biconvex type. If possible, get glasses with a meniscus lens, that is, concave on one side and convex on the other. You will find that they will give a flatter field with less distortion at the corners of the print, which is of greater importance with the shorter focal lengths. It might well be mentioned at this point that any auxiliary lens added to an anastigmat will produce a curved field, and so in copying flat originals the lens should be well stopped down and the distance adjusted so that the object does not approach too near the edges of the field. Straight lines near the edges will also be slightly curved with *any* supplementary lens. However, with average close-up work one is dealing with one principal object with other objects in the field of view at varying distances; straight lines are rare. Thus, a slightly curved field is not objectionable. The results are quite good, and one has the advantage of being able to purchase lenses of almost any focal length desired. Figure 1 represents a section of the contact print measuring about 13 x 20 mm. ($\frac{1}{2}$ " x $\frac{7}{8}$ ") and is enlarged to about 4"x5" to show the definition attainable. It was made with a Rolleicord with a ten inch spectacle lens on Panatomic roll film, 1/50 second at f/11.



Fig. 1

In purchasing spectacles for this purpose get them with the celluloid frames and of the focal length at which it is desired to work. On each lens you will find a label with the focal length in both diopters and inches. The number above the line represents the focal length in diopters which is the reciprocal of the focal length in meters. For example, 1.00 means a focal length of one meter; 2.00 refers to a half meter; 4.00 means a fourth meter and so on. The number below the line is inches and requires no translation. The camera with its lens set at infinity will focus sharply at about twenty inches if a twenty-inch spectacle lens is placed before the camera lens. Thus we can buy lenses to suit any distance at which we desire to work. With the camera lens racked forward for near work we find a focus nearer than the focus of the spectacle lens so with a camera focussing as close as one meter we can cover all distances from seven inches on with the following assortment, 8, 10, 12, 20, and 40 inches. The two lenses of the pair are well enough matched for one to be placed before the finder lens of the camera and the other before the taking lens with the assurance that what is seen in the finder will be in the same focus as that on the film. In case of doubt try first one lense of the pair, then the other over the finder lens of the camera, at the same time observing the objects in sharp focus on the ground glass. In case of any discrepancy the glasses can be exchanged at the store if the labels have not been removed.

Following is the method used for utilizing spectacle lenses on the Rolleicord. Modifications can easily be made for the Rolleiflex or other types of twin lens reflexes, or for any single lens camera with ground-glass focusing.

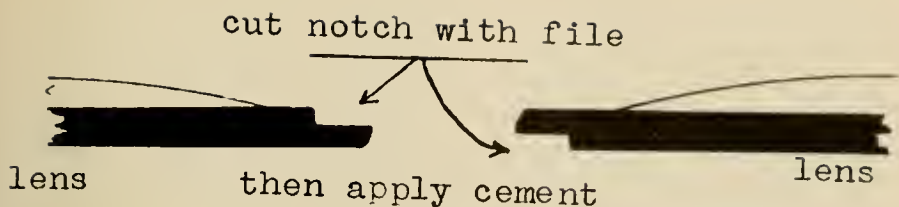


Fig. 2



Fig. 3. Shape of cut out for lens holder

First the ear pieces of the glasses are removed by taking out the pin in the joints, then with a sharp knife or hack saw the projecting pieces are cut off the rims and the latter separated from the connecting piece across the nose. The edges are then filed smooth so that each lens is separate in its celluloid rim. If the lenses are now placed over the camera lenses and centered it will be found that the rims will overlap about half the width of the rim. With a file a step cut is made as shown in Figure 2. In each cut is applied a drop of celluloid cement (DuPont or some obtainable at the same "dime store") and the two lenses placed together as illustrated and allowed to dry. Then additional cement is placed around the joint to strengthen it and allowed to dry longer. The cuts should be made so that the convex side of each lens is forward. In any case the side of the glass bearing the label should be turned forward. In the case of a camera having a greater separation of the two lenses a piece of the nose piece or other bit of discarded celluloid can be cemented in place between the lens rims to provide the necessary separation.

Next we may consider the means of mounting these lenses on the camera. The type shown at the bottom of Figure 4 was used since it is easily constructed and because being separate from the lens it could be used for other lens combinations. It is made from a strip of tin plate. The width is that of the width of the camera lens mount and the length a little longer than the camera lens circumference. It is cut with three or four tabs as shown in Figure 3 which are later bent to hold the lens as shown in Figure 4. No dimensions are given as they will differ with lens mounts of different manufacturers. The strip is bent into a circle and the ends soldered so that it fits snugly around the camera lens mount. It is better to line this holder with felt cemented in place. The allowance for the thickness of the felt is made before the ends of the strip are soldered together.



Fig. 4

The tabs are then bent and the rough edges smoothed off with a file. A coat of black enamel gives it a more finished appearance.

In cameras of certain makes one finds the finder lens on a plane behind the taking lens while on others both lenses are on the same plane. This is of no consequence as a separation of a fraction of an inch between the lens and the auxiliary lens is of no consequence on the focus. However, both supplementary lenses should be on the same plane so as to be the same distance from the object photographed. This is extremely important in close up work where a fraction of an inch means out of focus.

Even though your camera has automatic compensation for parallax at regular taking distances you will find you must make compensation for the separation of the two lenses when working very close to the subject. At less than a foot distance, for example, we will find the image in the finder does not correspond to the actual picture in the angle of view. It will be necessary after focussing to raise the camera a distance equalling the separation between the centers of the two lenses. This places the taking lens in the exact position of the finder and then the picture will be exactly as was seen on the ground glass. In distances greater than a foot or so the difference in the angle of view and the distance to the finder lens is negligible and compensation in centering the object can be done merely by tilting the camera. One can pick a point about an inch and a half above the center of the object to focus upon and center in the finder. With a little experience the matter of parallax compensation is very simple.

Spectacle lenses may successfully be used with roll film cameras of the non-reflex type. In this case a similar mounting and a single lens is



Fig. 6



Fig. 7

used. With no film in the camera a piece of ground glass is placed over the film rollers and with the shutter open and auxiliary lens in place the camera is focussed upon objects placed at various measured distances in front of the lens. A table is then prepared for each supplementary lens showing the object distance in inches, the reading of the focussing scale and the size of field covered. Later with the camera loaded, close-ups can be taken with the distance measured and the object centered by guess as the regular finder is then worthless. Very excellent copies and close-ups have been made by this method with roll film cameras of both miniature and snapshot size.

Spectacle lenses of eight inch focal length serve well with movie cameras for making titles and lenses of about twenty inches, may serve as wide angle supplementary lenses on focussing screen plate cameras. It was in the latter use that a more commercial appearing lens mount suggested itself. It was found that the lens mount of a Voigtlander Avus fit snugly inside a spectacle rim with the glass removed. A pair of 'dime store' spectacle frames was available,—the lenses having been previously removed to make movie camera titlers. The ear and nose pieces were removed as has been described and the two empty rims and a third rim containing the lens selected were cemented together in a pile as one would stack poker chips. When dry the edges were sand-papered smooth and given a coat of black enamel to improve the appearance. It then fit snugly over the camera lens and is shown in place in Figure 7. The lenses may be easily removed from their frames by bending the edge of the rim sharply with the lens held in one hand and the nose piece in the other. As the edge of the glass appears it can be worked out of its rim. If desired, it may be reinserted in a similar manner. Thus either the rim or the lens may be utilized without destroying the other. This must be done, however, before the nose piece is cut from the rim.

Practical Miniature Camera Photography

H. Crowell Pepper

Part IV: The Negative

(Continued from February issue)

Subject Tone Range. The importance of some knowledge of the tone range of the subject is not recognized by the vast majority of Amateurs. The fact that it is the light reflected by the various objects and not the general lighting of the subject which affects the emulsion is overlooked. The average persons has little conception of the truly close relationship between the brightest object and the deepest shadow. On numerous occasions I have asked persons, some of whom were quite good photographers, how much brighter the sky light was than a building in shadow. While the answers have varied they were in every case incorrect being considerably higher than the actual tone relationship. The introduction of the photo-electric exposure meter has been a boon to photographers enabling them to actually measure the tone range of subjects. It has shown the average sky on a sunny day (not the sunlight) has a brightness of approximately 1600 candle power and under the same conditions the shadow side of a tree trunk will have a brightness of 50 candle power, a range of 32 to 1. Ordinarily a person would say the sky was a hundred times brighter. Such measurements have enabled us to classify subject tone range as follows: (a) Low, 1 to 10; (b) Medium, 1 to 20; (c) High, 1 to 40; (d) Extreme, 1 to 50 up to 1 to 100. These are averages as you can readily see. Take a dull cloudy day and the tone range may be as low as 1 to 5 or as high as 1 to 10. We speak of such a subject as being flat; tone ranges between 1 to 10 and 1 to 20 we term "soft"; 1 to 20 up to 1 to 40 are good contrast and the higher ranges are said to be "strong" to "extreme." It is seldom, outdoors, we find a tone range exceeding 1 to 40, though occasionally we find an extreme of 1 to 100 (note illustration previously given of the child



"The Road Runs By"

J. Ghislain Lootens, A.R.P.S.

Zeiss Ikon Third Annual Exhibition

Data: Zeiss Ideal B; 15 cm. Zeiss Tessar F:4.5 1/100th sec. at F:8 with eight yellow filter; 11x14" print sepia toned.

our extremes of subject tone range, a good example being the strong light from a single window and the dark furniture in the shadow light. The importance of some knowledge of subject tone range becomes apparent when we undertake to determine the exposure to be given, the development gamma and the type of printing paper to be used. It is not often we find a subject with a tone range greater than the negative tone range but our present day printing papers seldom exceed a range of 1 to 50 or 60. Since the subject of subject tone range is so closely allied with that of exposure we shall consider it further under the heading "Exposure". To aid some of my readers who do not possess a photo-electric type of exposure meter I am including the following table of subjects. Such a classification may only be approximately correct depending upon light variations.

1. Long Tone Range Subjects.

Interiors generally

Indoor portraits

Subjects under trees including portions of sky

Sunlit landscapes, including sky and heavy foreground

Snow scenes (sunlit) with dark trees or buildings in the foreground.

2. Medium Tone Range Subjects:

Ordinary sunlit landscapes with open foreground

Open air portraits with sunlight

Groups in sunlight

Average street scenes.

3. Short Tone Range Subjects:

Open landscapes, vistas

Ordinary landscapes on dull days

Outdoor portraits in shade

Groups in shade

Athletic sports in open.

Exposure. In photography "exposure" may be defined as that time interval which the reflected light from the subject passing through a lens is permitted to act upon a light sensitive emulsion, necessary to make silver available for deposit upon development, sufficient to record the darkest part of the subject as a thin silver negative tone. With this definition in mind we may readily understand the importance of the matters heretofore discussed. Exposure makes the silver available while development in addition to reducing the silver halide to metallic silver determines how far apart the negative tones are spaced. No developing agent, formula or time of development can reduce more silver than is made available by a definite exposure time. If you under-expose, development will not reduce silver in the shadows and attempts to "force" development will merely increase the contrast by increasing the spacing of negative tones giving a soot and whitewash print.

The terms "correct exposure", "normal exposure" and "times normal exposure" though not new have taken on a greater significance with

H. & D. CURVE

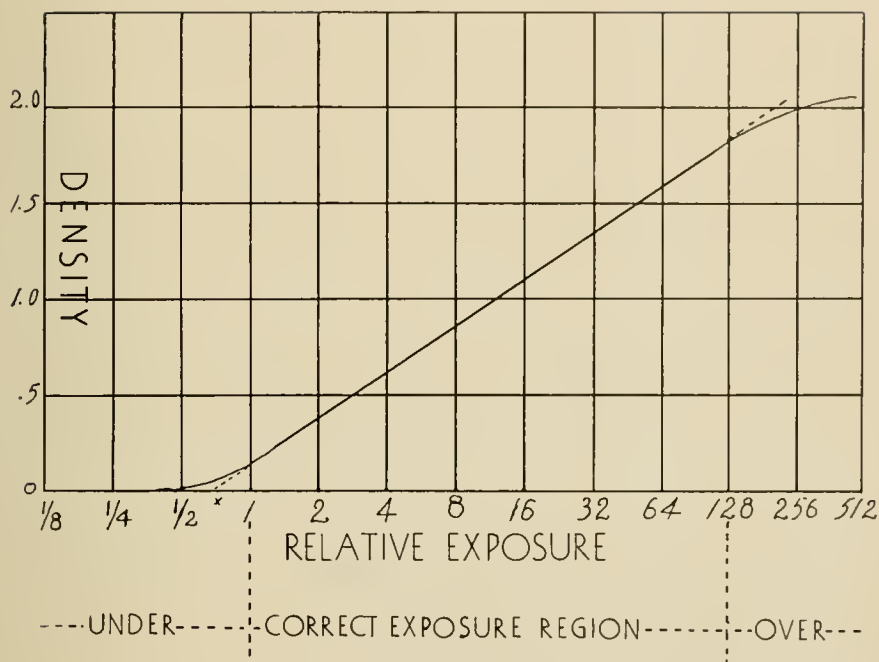


Fig. 1

the introduction of the miniature camera. These terms are used quite freely to-day with apparently little knowledge of their true meaning. I understand the term "correct exposure" to mean the time which the light is permitted to act upon the emulsion to give a truthful negative tone range of the tone range of the subject. Even this is subject to qualifications. "Normal exposure" is more difficult to define. The word normal being synonymous with average. Exposures of $1/5$ th, $1/10$ th and $1/25$ th of a second may all be normal exposures for the same subject, same emulsion and same development depending upon the tone range of the subject. The only noticeable differences in the negatives being that of density. "Times normal exposure" is, without some explanation, a meaningless expression. We are advised to double normal exposure and develop on the short side to avoid loss of emulsion speed in development and to secure a fine grain image. When we know with a particular set of conditions there may be two, three or four normal exposures which shall we double?

We shall secure a much better understanding of the problem of exposure and the above terms if we have before us a drawing of the Hurter and Driffield Curve (Fig. 1). The figures to the left represent the "gamma" designation of density while those below refer to exposure. The density figures range from 0 to a gamma of 2, the latter being practically gamma infinity for most of the films we use in miniature photography. Our exposure fig-

ures from left to right double each preceding figure. The relation between density and time of exposure of an emulsion can easily be represented as a curve, and for most of this curve the density is increased proportionately as the exposure is doubled. You will notice that at the beginning we have a decided curve, then a straight line section and finally another decided curve. The first curve is termed the toe and represents the region of under exposure. The straight line portion is that of correct exposure while the upper curve is the region of over exposure. A dotted line is drawn carrying the straight line to the lower scale, the log E scale, and where it meets the latter we have the point of inertia. This point represents the exposure necessary to reach before the light action is sufficient for the developer to deposit the first appreciable deposit of silver.

The emulsion represented by this particular curve possesses a long tone range, about 1 to 128. As I stated above the Weston meter is calibrated upon such a tone range. Whenever our exposure is placed upon this straight line it is termed correct exposure, our deepest shadow will have a thin veil of silver and our highest light will not be blocked. At this point we must consider our subject to be photographed and the tone range of the light which it reflects. Assume for purposes of illustration that the tone range of the particular subject is 1 to 30, a normal range for a good contrast subject. It becomes immediately evident that this range may be placed in four distinct positions upon our straight line since thirty divides into one-twenty-eight four times. Of course there are innumerable places for this 1 to 30 range but we are limited by the arbitrary speeds of our shutter. If $1/50$ th of a second at $f:8$ will place the subject upon the lower portion of the curve we can still expose $1/25$ th, $1/10$ th and $1/5$ th second and secure perfectly correct exposure. As I said before, when this negative is developed for the normal time, whichever exposure is selected, the subject tone range will be properly duplicated the only difference being in the density. The exposure $1/50$ th second will give a thin negative the remaining three exposures giving respectively denser negatives.

In miniature camera photography our problem is to secure a tiny negative which may be enlarged many diameters. Since the incident grain must necessarily be enlarged we seek the finest possible grain in our negative. We are forced to use developers with a low developing potential. The use of such developing agents results in a loss of emulsion speed during development so we place our subject tone range higher upon the straight line of the curve. We do this by increasing the time of exposure. According to the amount of loss in emulsion speed sustained by the particular developer we are using, we increase our exposure. In the illustration given in the previous paragraph we may use either $1/25$ th, $1/10$ th or $1/5$ th of a second? Have we doubled the normal exposure if we use $1/25$ th of a second? All four exposures are normal. Actually to double normal exposure we should give $1/2$ second. Herein lies the true explanation of the expression "give double normal exposure".

A Heater For The Darkroom

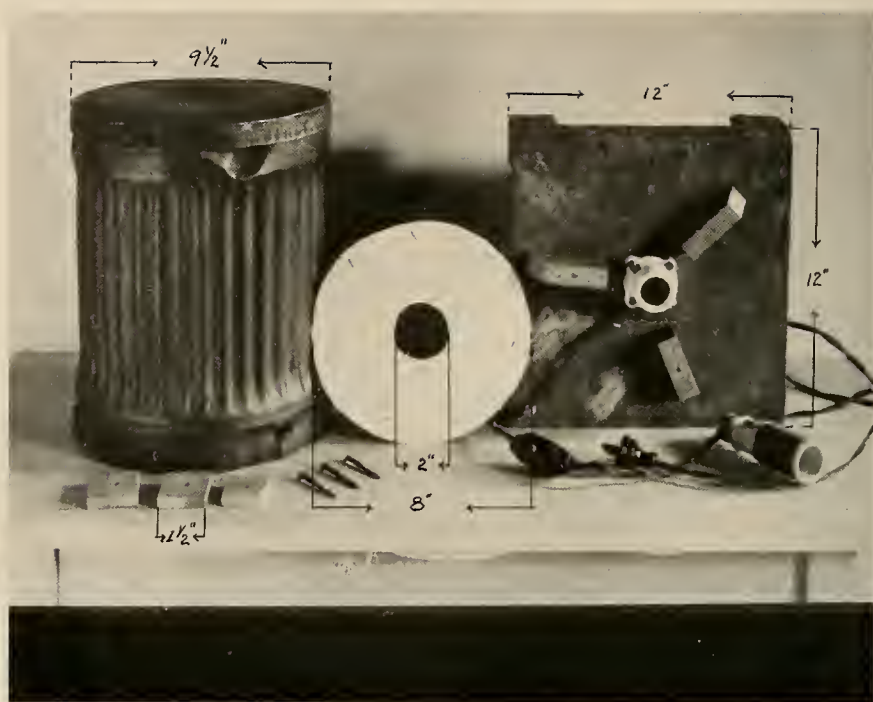
Dr. H. C. Atwood

AS amateur darkrooms are so often a compromise or an addition, the heating of one is an individual problem. Panchromatic films have made it necessary to pre-heat or find a heater without light. This article describes a simple and easily made dark heater. Electricity is the most practical source for heat and as the heating element of an ordinary spot heater is large enough for a small room, such an element was used for a portable heater which has proved both handy and satisfactory.

At a furniture store I found a metal drum in which half-lengths of stove pipe were shipped. This is $9\frac{1}{2}$ inches in diameter and $12\frac{1}{2}$ inches long, one end has a metal cap fastened to the drum by four rivets, the other end had had a removable cap fastened on through three slots cut crossways in the drum and one inch from the end, both cap and slots saved work later on. In case you cannot find such a drum a half-length of six inch stove pipe and a chimney hole cover can be adapted to this plan.

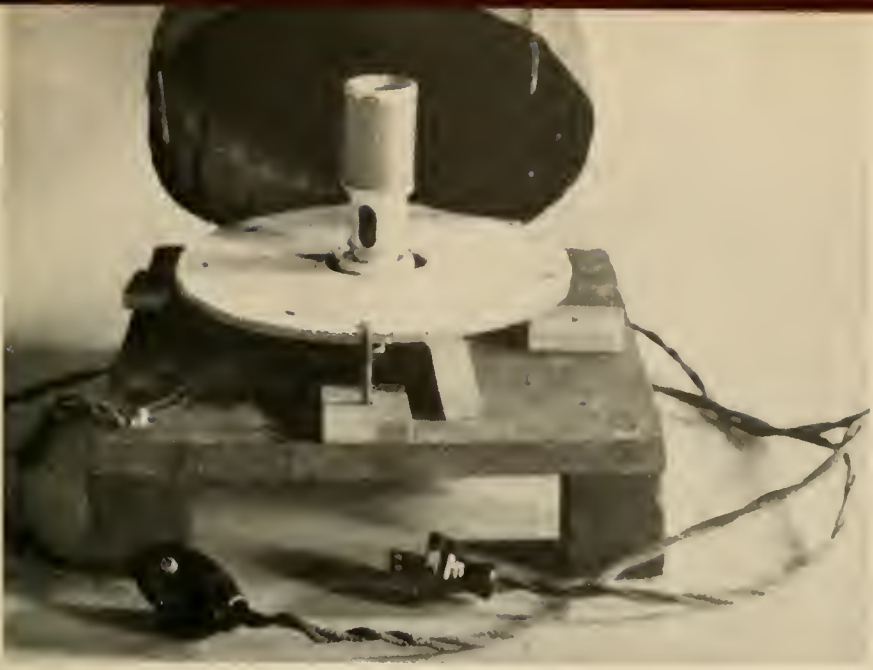


The Completed Heater



The element before assembly

The base is a piece of 12 inch board 12 inches long, as this will get rather warm it is better to set it up on legs three inches high. I used 2 x 2 three inches long set under the corners and nailed through from above, but narrow strips of board can as well be nailed to the edges of the base. On top of the base draw lines connecting opposite corners, this gives the center of the base and from it mark out on the lines $4\frac{3}{4}$ inches each way, or half the diameter of the drum, so as to make it easier to center the drum later on. Get a keyless porcelain base or light socket and a screw type heating element. Fasten the socket at the center of the base with a two inch round piece of asbestos paper under it. Provide enough light cord to reach from a light source to where you want the heater, put a plug in one end and fasten the other end to the heater socket and with insulated staples, fasten the wire to the base, running it out to one corner. When set up, you will find that a line switch put at a convenient place along the cord, is a worthwhile addition. A baffle plate is needed to deflect both light and heat from the bottom, and can be made from one-quarter inch plywood. Cut it eight inches in diameter and at the center cut out a two inch hole. I used an extension bit and a jigsaw but the wood is thin enough for the two inch hole to be cut out with a knife if small holes are bored round the edge of the circle. This makes a baffle plate roughly three-quarters of an inch smaller all round than the inside of the drum, with a hole larger than the socket for the heating element. Cover the baffle with



Last step in assembling the heater

asbestos paper which must not project beyond the wood. The two inch circle from the center can be used under the socket as described previously. Raise the baffle an inch from the base with three one inch blocks of wood, center it around the socket, and you will have free circulation of air around both heating element and drum, and still deflect the light and heat.

Take the drum and slip a screw driver under the cap between the rivets and you can easily buckle in the sides so as to allow a free circulation of air without letting light through. Then slip the screw driver into the slots near the other end and spread these so a big screw can be slipped through them and point toward the end. Now the drum is ready to attach but put in the heating element before fastening it down. Get three roundheaded screws three inches long, and also three one and a half inch square blocks of half inch wood and bore holes through the centers of these blocks as large as the diameter of the screws. Roundheaded screws have a square shoulder which will hold against the edge of the slots, so, with the drum over the baffle plate, slip the screws through the slots and through the holes in the blocks. With them drum centered over the marks it is easy to hold the screws upright with the small blocks while screwing them into the base. These blocks are used, of course, to allow the air to enter the bottom and circulate through the heater.

The flat top of the drum makes a fine hot table for trays or for warming water.

Cinema Section

Edited by

William A. Palmer

Positive Film For Titles

NEWCOMERS in the amateur movie game are often confused about just what so-called positive or direct titles are. We hear that they are inexpensive, that you can make them yourself, that they are made on positive film but are developed as negatives giving a positive image of a negative title card. But such a mess of positives and negatives gets us down and we still don't know what they are, let alone how to make them. Let's see if the situation can be clarified.

Early in the history of motion pictures it was discovered that the most pleasing and most easily read title was one in which the lettering was white against a black or dark background. So all professional producers of theatrical films soon standardized on that type of title. The fact that white letters on a dark background in a moving picture title are better for reading than the reverse values, which we use universally in printed books and newspapers, is a bit curious at first thought. But we read movie titles from a distance whereas ordinary printed matter is held close-by and most people's distance vision is not so good as their view at arms length. Also a white background for titles has been found to show projector flicker and dirt and scratches on the film more readily.

When amateur movies went in for titling, the most pleasing results were obtained, as in the professional case, from white letters against a dark background. The logical way to make such titles was to prepare cards with white letters and photograph them with the ordinary reversal film, the values on the processed film being the same as the title cards. This is still a popular way to make titles and is used by most amateurs who do not care to undertake home processing of film.

The only drawback to the use of white letters on title cards is that they are so difficult to make. White poster paint on black show card is about the best arrangement for hand lettered cards, but the white paint is rather difficult to handle on a brush or lettering pen and get a smooth letter to cover the background. Lettering with india ink on a white card is very much easier. With

the introduction of small titling devices using a card about 3 by 4 inches, the typewriter came into use to print titles. Here again it was almost necessary to print black letters on a light card, although recently there have been special typewriter ribbons made to print in white ink. The most common type of title with these small titlers has been a compromise of black letters against a mottled grey background, a combination which is very pleasing on the screen.

However, it did not take resourceful amateurs long to adopt an old trick of professional film producers and achieve the desired white letters in the finished title by photographing white cards with black lettering. It is simply a matter of photographing the title and then merely *developing* the film as a negative instead of *processing it by reversal* to give a direct positive. The negative image of the black letters, whether typewritten or hand lettered, is naturally the desired white lettering. Any film can be used for this type of title as long as it is developed only, but it so happens that the best film for the purpose and also the cheapest film one can buy is known as "positive" stock. It is called "positive" film because it is ordinarily used for making positive prints from motion picture negatives, a procedure uncommon in amateur movie work. When used for titles this film is said to be "developed as a negative" since it is treated by the same chemical process which is used for developing still camera negatives.

Shooting titles on positive film, then, has the dual advantage that one can use easy-to-prepare title cards with black letters and save a great deal on the cost of titles, since the total cost is about 2 cents per foot in 16mm film. Eight millimeter titles on positive film can be made too, although one must purchase a slitler to split the film after it is processed. The disadvantage of titles on positive film is that one must do his own processing in order to get the best results. Commercial film laboratories will develop the film for a reasonable charge, but their regular developers will not give as contrasty a result as most amateurs desire.

How to Make Them

The cards for titles on positive film can be made in many ways depending upon the type of lettering used. In most common use are typewritten and hand lettered cards. Either of these can be satisfactory. The typewritten cards look better if the impression is made by removing the typewriter ribbon and printing through a new sheet of carbon paper. In this way the outlines of the letters are extremely sharp. Hand lettering is not difficult if one is neat, spaces the letters well, and makes all the vertical lines of letters really vertical. Best of all for easy title lettering is one of the lettering guide sets now on the market. These are made by various draughting tool makers, one of whom makes a special outfit for cine titling.

The cards used can be plain white or can have a texture in a light color. Mottled grey show card or various textured wallpapers are excellent. As a matter of fact a wallpaper sample book is a wonderful source of varied title backgrounds. Of course, if the titles are to be typewritten the cards should be of light enough material to bend easily around the typewriter roller. When the cards are made for one of the small titlers now on the market, the lettering should be composed within a space of about $1\frac{1}{2}$ inches by 2 inches. These titlers take a card about 3 by 4 inches but the area included by the lens is much

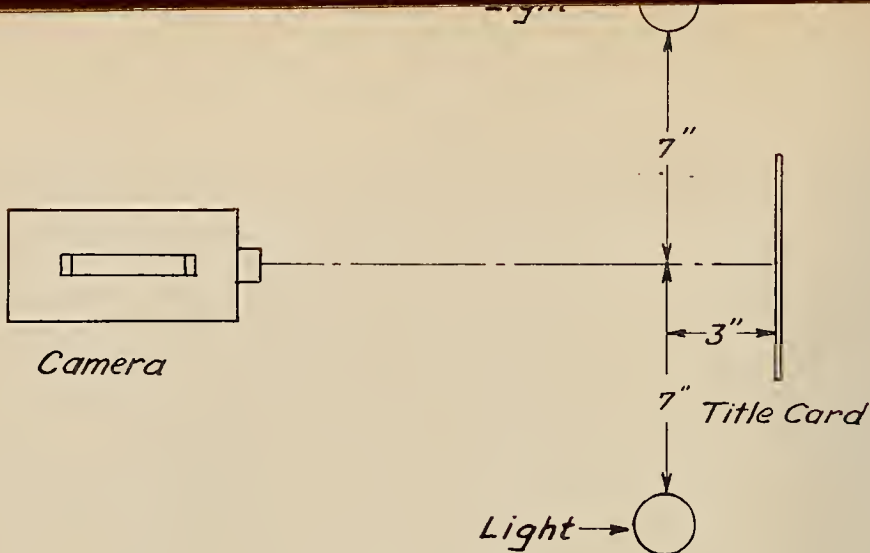


Fig. 1

less, being about $2\frac{1}{4}$ by 3 inches. Keeping the lettering width to 2 inches gives a good margin, making the centering of the title less difficult.

The title card should be illuminated by two No. 1 photofloods placed as shown in Figure 1. The angle of the light hitting the card, must be quite small so that there are no specular reflections from the black letters into the camera lens, a condition which will be obtained if only one lamp is used and placed above the camera and near enough to the center line to illuminate the card evenly. It is this specular reflection of light from the slightly glossy surface of the black ink that makes it difficult for some workers to obtain good clear white letters if the background is exposed so as to be dark enough. The photoflood bulbs need not have reflectors, but they should be shielded so that their direct glare does not strike the camera lens.

The proper exposure to give the titles must be determined by actual test, for good titles on positive film must have just the right exposure and not one bit too much. The development of the film in a contrast developer must be standardized and the exposure regulated until the desired density is obtained. A most satisfactory title developer which will give ample contrast if the proper illumination is used is the Eastman D-19 X-ray developer formula. This can be purchased in prepared form or one can make it up himself:

Water (125° F.).....	64 ounces
Metol.....	146 grains
Sodium Sulphite.....	14 ounces
Hydroquinone	1 ounce 146 grains
Sodium Carbonate	7 ounces 28 grains
Potassium Bromide.....	360 grains
Water to make.....	1 gallon

Use at 70° F. and develop five minutes.

A Caustic Soda developer will give still greater contrast than the above, but greater contrast should not be needed and since the Caustic developer will not keep more than a few hours, while the X-ray developer will keep for months, the former is not recommended.

The apparatus used to handle the film during developing can be simple or elaborate depending upon the volume of film one wishes to handle. For those who wish to make only a few titles at a time, it is feasible to develop each title separately in an ordinary 8 by 10 tray. If the titling can be done in the dark room, the camera can be loaded with the positive film but without a take-up reel. One title can then be photographed, allowing the film to coil up any way it will inside the camera. Then the lights can be turned out and the positive film can be cut off and developed. One title, which will seldom be more than five feet of film, can be handled easily in an 8 by 10 inch tray filled with developer to a depth of three-quarters of an inch. The film is slid into the tray and allowed to remain in a loose coil, while it is agitated to make sure the developer acts evenly. It does no harm to have adjacent turns touch one another after the film is wet, so long as they don't remain together more than a few seconds. Five minutes development, a rinse and fixing in ordinary acid hypo followed by a good washing finishes the job. As the individual title lengths are hung to dry, the excess moisture should be removed with a viscose sponge or soft chamois.

The positive film can be purchased in 100 foot rolls either on daylight loading reels or in laboratory packing which means it is rolled up on a plain core and must be unpacked in a darkroom. It is available in 400 foot rolls in laboratory packing only, and can be split up and spooled for loading in the camera. Extra camera spools can be purchased at any cine dealer. The positive film can be obtained in a variety of colors, making it very suitable for splicing into color film. Amber, pink, red, green, purple and several other tints are put out by the several film manufacturers and they cost no more than plain black and white stock.

Titles on Positive by Transmitted Light

An idea which works out very well for positive titles is a home made device to shoot the titles by light transmitted through the title card instead of being reflected from it. Figure 2 shows the arrangement which can be made very inexpensively. A cardboard or light wooden box 4 by 5 inches by 10 inches long is made up. One end is closed but mounted in the center of the closed end is a simple lens of 10 inch focal length. Such a lens can be purchased from any optician for very little. To them it is known as a 4 diopter lens. On the other end of the box is placed a title carrier consisting of two sheets of glass hinged together by adhesive tape in book form. The inner sheet of glass which closes the end of the box is clear, but the other piece is a sheet of opal or milk glass. The camera and box are mounted on a common board so that the camera is aimed squarely through the lens to the end of the box having the sheets of glass. The camera should be so mounted on the board that it can be removed and replaced again in exactly the same position. This is best accomplished by a piece of wood laying along side the camera which prevents it from being turned.

The title cards in this case are lettered on thin onion skin paper in opaque

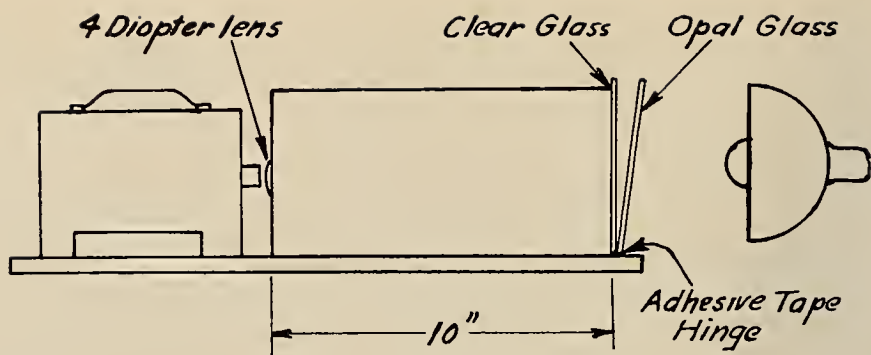


Fig. 2

black ink and placed between the two pieces of glass. The lens, if a focussing type, is set at infinity; if fixed focus it is already in adjustment. The exposure is made by the light of one number 1 photoflood bulb in a reflector held six inches from the opal glass.

The exact field of the lens and its position on the glass title card holder must be determined by trial. This can be done by placing a sheet of cross section paper in the holder, marking its position with relation to the glass. Several horizontal and vertical lines on the cross section are numbered and a few feet of film are exposed. By reference to the developed film thus made, the exact field and position of the lens can be located and marked permanently on the glass card holder. A line marking the outline of the camera frame will not show if it is made slightly outside the camera field and yet will be a perfect guide for correct centering of the titles.

The advantage of this method of shooting by light coming through the title is that extreme contrast is easier to obtain. As long as the letters are opaque, it is only necessary to expose heavily enough to give a good dark background. Reflections from the surface of the letters, of course, do not occur. This method has the disadvantage that fewer varieties of texture backgrounds can be used.

Obviously this same idea can be worked on the regular titlers by using thin paper and illuminating it from behind but one must be careful to prevent the spill light from the photoflood reflecting on objects in the room and partially illuminating the front of the title. The closed construction of the home made gadget prevents this.

Questions and Answers

Question: Can a fixed focus lens be used for extreme close-ups and titles?

Answer: Yes. With the aid of a supplementary lens the fixed focus lens can be made to focus at any nearby distance depending upon the focal length of the supplementary lens chosen. Fixed focus lenses on 16mm cameras with a standard screw mount can be focussed to close distance by unscrewing the lens. One full turn makes the lens in critical focus for objects three feet from the camera. Unscrewing the lens two full turns makes the lens in focus for objects fifteen inches from the camera.



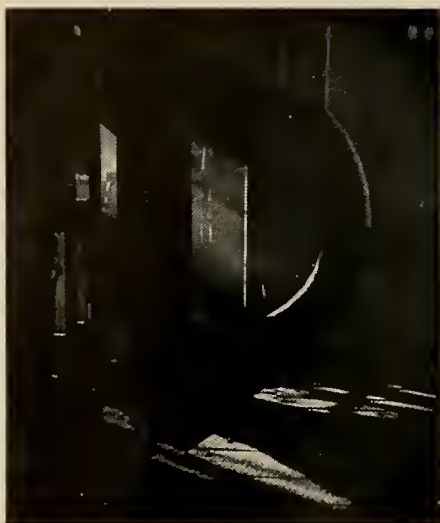
"Parachute"

*Otto Rothschild
Los Angeles, Calif.*

Advanced Medal Print

■ Contrast this picture with the many you have seen of descending parachutes and you have a splendid illustration of the difference between a pictorial or artistic rendition of a subject and a rendition which does not possess those qualities. This picture evokes the emotional response that is in keeping with such a hazardous action and has visual beauty besides. Observe how the back lighting on the parachute gives life, meaning, interest and pictorial beauty to that contrivance. Notice how the feeling of action is enhanced because the figure is swung out to one side, and because the parachute is not perfectly circular but is being whipped about by the wind. In short Mr. Rothschild has caught this subject at a moment and from a point of view which gives us the maximum of emotional impact and pictorial beauty. Whenever we succeed in doing that we can be sure that we have achieved an artistic rendering of our subject matter.

Data: 4 x 5" Graflex Series D; 18 cm. Zeiss Tessar F:4.5; 1/500 sec. at F:5.6 on Defender X.F. Pan., in Pyro-Metol-Acetone; by noonday sun, no filter; Defender Velour Black I, in Amidol; print size 11 x 14". 11 x 14" prints on 16 x 20" mounts may be obtained at the price of \$10.00 upon application to Camera Craft. Prints will be exchanged with other prize winners in these competitions only.

*"The Beat of Industry"*

S. S. Smith
St. Louis, Mo.

a reasonable viewing distance in relation to the size of the print, but begins to fall off in tone values upon close inspection. This indicates either slight deficiencies in printing or too great enlargement of the negative. Print size $13\frac{3}{4} \times 16\frac{1}{4}$ ".

No data.

Third Award

Advanced Class

■All will agree that Mr. Shigeta has achieved a very effective picture, but there will be much less agreement as to whether or not it should be classed as a photograph. We feel that this picture is at least as effective pictorially, as the full scale print of this subject which Mr. Shigeta has shown in the past. We do not question the fact that the print was produced by purely photographic means. It is nevertheless obvious that the end result is distinctly reminiscent of the technique used in poster painting. It is also obvious that this print would be tremendously effective if used as a poster for the treatment gives it carrying power that no full scale photograph could hope to attain. We do not propose to add a redundant tidbit to the discussion of what is and what is not legitimate photography. That is a question which each photographer must decide for himself in the long run. We prefer to give Mr. Shigeta credit for demonstrating with this picture a photographic technique that is tremendously effective in producing pictures for poster purposes. Photographic posters have achieved a considerable success in Europe, but have hardly been used at all in this country.

Data: $8 \times 10"$ Studio camera; $24"$ Dagor lens; 1 sec. at $F:11$; this print is all photographic, achieved by the combination of several negatives. Print size $11 \times 14"$.

*"The Railsplitter"*

H. K. Shigeta
Chicago, Ill.

Fourth Award

Advanced Class

■ This picture is pure entertainment. It differs from the usual pictorial photograph just as a light, frothy comedy differs from a full-throated drama. We are amused at the military precision of line-up and spacing and find ourselves searching out the rebels in the ranks who have the temerity to face in the wrong direction. The alert photographer can find many opportunities for capturing amusing little anecdotes of this kind. The animal kingdom is an especially fertile field for so many animal actions and expressions echo the activities of man. We can recall two pictures of this type which were particularly successful. John Schiede's "Proboscis Solarization" which appeared in these pages in July 1935 and a picture of a man holding a pig, by Dr. Paul Wolff which was shown in last year's *Das Deutsche Lichtbild*. The photographer who turns out good things in this vein will be surprised at the welcome they will receive. We all like to laugh.

Data: 9 x 12 cm. camera; 6" Zeiss Tessar; 1/25th sec., at F:11 on Agfa Plenachrome, in D-76; K-2 filter; E.K. P.M.C., in D-72.



"Music in the Air"

Gustave Anderson
Amitville, N.Y.

Fifth Award

Advanced Class



"Das Marchen"

Ante Kornic
Ljubljana, Jugoslavia

■ Personally we enjoy this picture and would like to have seen it placed higher in the rating, but the other judges, and there is much to say for their point of view, felt that the print quality was not good enough to warrant that. The most interesting point for discussion concerns the two little trees in the background and their relation to the composition. Admittedly they do strike one as a bit removed from the arrangement, and consequently one's first thought is that they distract attention from the principal interest and therefore should not be present. But if the two trees are covered up one quickly realizes that they do contribute a good deal to the success of the print. What we miss, somewhat, is a connecting line or connecting link between trees and buildings. There is little that can be done now, but if it had been possible to make this shot when the

sun was a little higher, so that the area of sunlit snow would have reached further up toward the trees, such a light area would more than likely have established the connecting link we desire.

Data: 3 x 4 cm. Makinette; 4.5 cm. Anticomar F:2; 1/100 sec. at F:3, on E. K. Panatomic in Perutz fine grain compensating developer; 10 A.M. on sunny day in Jan. with light yellow filter; Agfa Brovira in M. Q. 7 x 7" or 12 x 16" may be obtained at the price of \$3.00 and \$15.00 respectively upon application to Camera Craft.



"The Storm Passes"

*Fred Herrington
San Francisco, Calif.*

Amateur Medal Print

■ Mr. Herrington has invaded Ansel Adam's domain, Yosemite Valley, and come away with quite a successful picture. The brilliance of the sunshine is splendidly shown. The dark building touched with snow, contrasts most interestingly with the snow covered building cut by the dark line of the tree trunk, and the whole set up gives an excellent arrangement of dark and light tones. Observe the advantage of having fairly dark-toned clouds in the sky area. Keeping this area low in tone adds to the brilliance of the foreground material. A bright sky would catch the eye too much because the visible sky area is concentrated in a small patch. This is one case where clouds would surely need to be printed in had they not been present.

Data: $2\frac{1}{4} \times 3\frac{3}{4}$ " Graflex; $6\frac{1}{2}$ " Zeiss Tessar; $1/20$ th sec. at F:16, on E. K. Panchro Press cut film, in DK-76; late afternoon in December with K-2 filter; print on E. K. News Bromide, in D-72. Print size 8×10 ".

Second Award

Amateur Class

■ This picture appeals as a good straight forward portrait, natural in appearance and clean cut in its photographic handling. We might ask for just a little less concentration of light on the hair and forehead since the brilliance of this area in relation to the rest of the face tends to call undue attention to it. The touching in of the line between the lips has been overdone. This is especially noticeable at the right side of the mouth as we look at the picture.

Data: 9 x 12 cm. Zeiss Ideal B; 6½" Zeiss Tessar; 1/10th sec. at F:8, on Agfa Super Plenachrome, in D-76; by three photofloods in reflectors; E.K. P.M.C. #11 contrast in D-72



"Uncle Jack"

Jeann Rieman
San Francisco, Calif.

Third Award

Amateur Class



"Winters Morn"

Allen Sweet
San Francisco, Calif.

■ The effective presentation of a landscape subject almost always depends to a great extent in the bringing forward of a definite mood. A mood with which each part of the picture must be in keeping, and which should derive from the nature of the terrain shown. It seems to us that Mr. Sweet has been quite successful in bringing out a feeling of eerie unworldliness with this picture. The low angle of light, the barren trees, the unusual structure of the observatory at the crest of the hill, all combine nicely to enhance such a mood. The zig-zag line which runs through the picture does much to tie the whole thing together, and leads the eye quite firmly to the point of principal interest at the top of the hill. Observe that though this line runs to the very edge of the print at two points, the eye does not leave the picture in either case because it is caught and held by the continuity of the line as a whole. The imagination easily bridging the slight gaps which actually exist.

Data: 3¼ x 4¼" Voigtlander Avus; Skopar lens; 1/25th sec. at F:8, on Defender X. F. Pan., developed 12 mins. in D-7; at 9 A.M. in Jan. with K-2 filter; print on Defender Velour Black DL, developed 3 mins. in Amidol.

Fourth Award

Amateur Class



"Snow Bound"

*Hugh J. McGinnis
Crockett, Calif.*

careful to sift the snow into the patch being covered in a finely divided state and to dust over the surface so that it will approximate the textures of the surrounding areas. Slight dodging in of the upper left corner would do no harm.

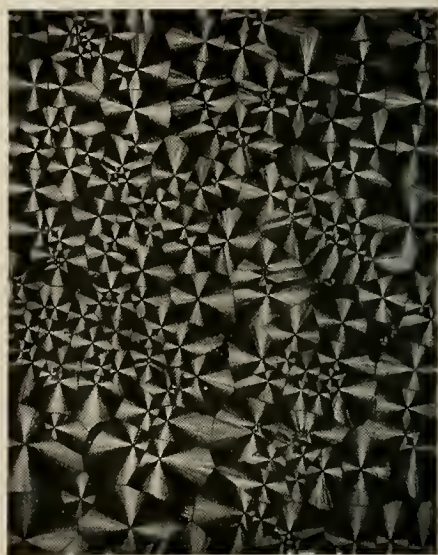
Data: $1\frac{3}{16} \times 1\frac{5}{16}$ Vollenda; Radionar F:3.5 lens; $1/50$ sec. at F:16, on E. K. Panatomic, in D-76; 8:30 A.M. in January with K-2 filter; Defender Velour Black DL, developed for $3\frac{1}{2}$ mins. in Amidol.

Fifth Award

Amateur Class

■Technically speaking this picture is better in its field than some of those which appear above it. As an example of photomicrography it is more fully successful than some of the others are in their respective categories. Such a situation obviously presents a problem to the jury that is required to place such a group of prints in one, two, three, four, five order. Consequently we feel called upon to explain to our readers from time to time the basis under which such difficulties are resolved, so far as that is possible. These competitions are conducted to evaluate pictorial photography, and therefore the basis of judgment is primarily the pictorial merit of the picture, that is to say the artistic merit of the picture, regardless of its subject matter. From the pictorial point of view this picture is of interest as a design, and the judges place it in the rating according to their estimation of the success of the print as a design. As such, the present picture is rather too confused in its organization to be entirely successful. If the principal objective of these competitions was the evaluation of scientific photography this picture would surely have taken first place. It should be added that in judging these competitions the broadest possible definition of pictorial photography is accepted, so that all work with a serious artistic purpose is included.

No data. Print size 16×20 ".



"Terpin Hydrate"

*Lester H. Brubaker
San Jose, Calif.*

Monthly Competition

Scoring for Club Trophy Cups

The following won points for their clubs in the Advanced Class: S. S. Smith for The Camera Clique; H. K. Shigeta, for the Fort Dearborn Camera Club; Ante Kornic, for the Fotoklub Ljubljana; and Otto Rothschild, for the Los Angeles Camera Club.

The following won points for their clubs in the Amateur Class: Hugh J. McGinnis, for the Crockett Photographic Society; Fred Herrington, for the E.P.I.C. Pool; Allen Sweet for the Photographic Society of San Francisco; and Lester H. Brubaker, for the San Jose Camera Club.

The following prize winners have no club affiliations: Gustav Anderson, and Jeanne Rieman.

Contributing Clubs

Aluminum Camera Club (New Kensington, Pa.)	Los Angeles Camera Club
Amherst Camera Club (Mass.)	Miniature Camera Club of Oakland (Cal.)
Baltimore Camera Club (Md.)	Montreal Camera Club (Canada)
Boulder Lens Club (Colo.)	Nassau County Camera Club (Mineola, N. Y.)
Brooklyn Camera Club (N. Y.)	Norfolk Photographic Club (Va.)
California Camera Club (San Francisco)	Oklahoma Camera Club (Oklahoma City, Okla.)
Camera Art Circle (India)	Okmulgee Camera Club (Okla.)
The Camera Clique (St. Louis, Mo.)	Paramount Camera Club (Glendale, Calif.)
Camera Club of Long Beach (Calif.)	Pasadena "&" Camera Club (Calif.)
Camera Club of Ottawa (Canada)	Photographic Society of San Francisco
Camera Club of Richmond (Va.)	Riverside Pictorialists (Calif.)
Crockett Photographic Society (Calif.)	San Jose Camera Club (Calif.)
Danville Camera Club (Ill.)	Sierra Camera Club (Sacramento, Calif.)
East Bay Camera Club (Oakland, Calif.)	Springfield Camera Club (Ill.)
E.P.I.C. Pool (San Francisco)	Stamford Camera Club (Conn.)
Fort Dearborn Camera Club	The Sump Ducks (Wilmington, Calif.)
Fotoklub Ljubljana (Yugoslavia)	Telephone Camera Club of Manhattan
The Fotoforum (London, Canada)	Worcester Photo Clan (Mass.)
Fox Valley Camera Club (Aurora, Ill.)	
Golden Gate Miniature Camera Club (San Francisco)	

Standing of Clubs

Large Clubs Advanced Class

Fort Dearborn Camera Club.....	8
Fotoklub Ljubljana	6
Los Angeles Camera Club.....	6
Photographic Society of San Francisco	6
Miniature Camera Club of New York....	2

Small Clubs Advanced Class

The Camera Clique.....	10
Baltimore Camera Club.....	4
East Bay Camera Club.....	1

Large Clubs Amateur Class

Golden Gate Miniature Camera Club.....	4
Photographic Society of San Francisco	3

Small Clubs Amateur Class

Oklahoma Camera Club.....	7
E.P.I.C. Pool	5
Riverside Camera Club.....	4
Washington Pictorialists	4
Crockett Photographic Society.....	2
Norfolk Photographic Club.....	1
San Jose Camera Club.....	1

Correspondence

Social Photography

Dear Sirs:

Our several dozen members wish to express their sincere appreciation to you for publishing the article "The Miniature Camera—Social Dynamite!", and especially Mr. Bristol for writing it. Our league has been organized on the basic principle so effectively expressed in the article. Artists in all ages have much of their greatness to their credit because they expressed the genuine spirit of their time, of their generations. Today's arts, including photography, to be really great must go down and treat of the vital things that matter to humanity; it must be a part of rather than apart from the stream of life. We are sponsoring classes in photography and generally call them "Social Photography", "Labor Photography", etc. We find many people who have long ago let their cameras gather dust after they got their full with family snapshots take it up with increased gusto—because it is really something important, "it is educational!"

A number of trade unions have asked us to help them make movies of their activities: educational, recreational, and others. Many people in these organizations become picture fans and join photography groups. It is our opinion that photography will come into its own as a genuine folk-art in the next generation. It is going to play an enormous role in our ceaseless struggle to improve civilization, and will be a weapon more telling even than the pen. To gets its message you need not have much learning and it strikes directly, it effects lastingly.

May we send our thanks to Mr. Bristol through you!

Very sincerely,
George Steele, Chairman,
Debs League for Visual Education.

About Plowing

Gentlemen:

It has been my pleasure to read the *Camera Craft* for a long period of time.

Your print department is of great inter-

est to me as I can always profit from your critics.

It is in the best spirit of fairplay that I now have a slight comment to make about a print in your magazine. Not that it is serious but, to me, a good example of how the best of us can be mistaken in the truthfulness of the "action" that is to be depicted.

In the December issue of "Camera Craft" (Page #604), "The Good Earth" by Robert Desmé appeared to me to be a "Natural" scene.

Briefly, the critic finds the greatest comment in the posture of the plowman here pictured. To quote: "Now it is obvious this action will best be shown at the instant maximum pressure is applied. (Continued) for at that time the body will be leaning forward over the plow handles, etc."

I humbly beg your critic to go where he can watch a man plow with oxen.

The condition that he has in mind, I am sure, is in connection with plowing with horses.

In this case the posture is not caused by a strenuous action on the part of the plowman to "push" the plow, but to guide the horse, i.e., the reins (unlike guiding oxen by verbal calls) are passed over the left shoulder, across the back, and forward under the right arm. This position makes it possible to pull on the right or left rein, by twisting your trunk, or stopping the horse by leaning back (Erect) to cause a tension on the reins.

Recently I had a "job" to make some "ad" material for a farm tool company, and in spite of the fact that I had always lived in the city, I was sure this would be easy. All that I had to do was to make one view of a man plowing with oxen (Still done today in parts of Delaware) and another one of our modern tractors, to create the obvious comparison.

I was told very promptly and clearly that the farmers would be so interested in my "crazy" plowman that they would not look at the new machines.

It has been a rule for us, in all pictures of a man working at a trade or profession, to let them be the critics and in that way save some embarrassment.

This looked like such a simple problem that we did not bother and so we were

told of the above conditions that I am passing on.

Very truly yours,

F. D. Pogue, Mgr.,

Richard R. Miller, Inc.

Notes and Comments

Our Cover Picture

Our cover picture this month is selected from the Third Annual Zeiss Ikon Exhibition which has just finished an unusually successful showing in New York, and is now "going on the road". All critics have been lavish in their praise of the technical excellence, and the great variety of material of the work shown in this exhibition. Don't miss it when it comes to your city. Below we give the schedule as it is arranged at present, additional bookings will be announced later.

The Parker House, Boston, Mass., February 25th-27th.

William Penn Hotel, Pittsburgh, Pa., March 4th-6th.

Palmer House, Chicago, Ill., March 15th-20th.

Book-Cadillac, Detroit, Mich., March 25th-27th.

Statler Hotel, Cleveland, Ohio, April 1st-3rd.

Biltmore Hotel, Los Angeles, Calif., May 6th-8th.

Last Call

There is still opportunity for a few more students to sign up and be included in the group which is guaranteed individual instruction in the Mortensen courses in San Francisco. Once the original roll is completed, Mr. Mortensen cannot promise that he will be able to give students signed up subsequently individual attention, since lack of time may force him to group them in classes of two or three. Anyone planning to take these courses should communicate either with William Mortensen, Laguna Beach, Calif., or the office of this magazine promptly upon reading this notice.

Happy Days . . .

There is every indication that 1937 will turn out to be the biggest year in the

history of the photographic industry. The steadily increasing use of photographs in every conceivable phase of business activity cannot fail to produce steadily increasing demands for equipment and materials. The astounding spread of interest in photography throughout all classes in our society is certain to be reflected in a tremendous volume of photo finishing during the summer months. The lean years through which we have just past have forced many a professional photographer and many a photo finisher to get along with inadequate or worn out equipment. That condition should be remedied as promptly as possible so that photographer and finisher may be prepared to cope with the increased business that is certain to come his way. So we have a suggestion for both the professional photographer and the photo finisher. Write to the Pako Corporation, Minneapolis, Minn., asking them to send you literature describing the truly modern equipment which the company offers. Make a careful survey of your needs (the company's experts will gladly advise you as to the most practical equipment for a given volume of business), and get your workshop in shape before you become too rushed to plan properly.

New Enlargers

Abe Cohen's Exchange is currently introducing the Optikotechna line of enlargers imported from Czechoslovakia. There are three machines in the line for various sizes of negatives. All are condensor enlargers of very precise manufacture, and equipped with Benar lenses of focal length appropriate to the size of film they handle. The Ideal takes $\frac{1}{2}$ V. P. and 35 mm. films. The Multifax takes sizes up to $6\frac{1}{2} \times 9$ cm. ($2\frac{1}{4} \times 3\frac{3}{4}$ "). The Laborant takes sizes up to $3\frac{1}{4} \times 4\frac{1}{4}$ ".

We are informed that the supply is limited so those interested should communicate immediately with Abe Cohen's Exchange, 120 Fulton St., New York, N. Y. Full information will be sent promptly and free of charge.

A Cool Enlarging Light

The Mercury Vapor type of enlarging light has long been the most popular kind of enlarging illuminate with the professional photographer, because this light throws off a minimum of heat, and has high actinic value for printing. Consequently there is no danger of over-heating the negative when such a light is used. Heretofore the amateur has not been able to utilize this sort of illumination because the only units on the market were large and expensive. R. O. Kubick, 633 W. Wilson, Glendale, Calif., is now offering the Mercury Argon Lights for enlarging, in a size and at a price that is eminently suitable to amateur needs. The standard light which he offers measures, $10\frac{1}{4} \times 6\frac{3}{4} \times 2\frac{1}{4}$ ", over-all including Argon Grid, reflector, and diffusing lens, mounted in a compact case. This unit is priced at \$17.50 complete with transformer and cord. Prices on special designs and sizes to fit the sort of enlarger you want will be furnished on request.

The Harrold Exposure Meter

A few years ago before the advent of the modern photoelectric exposure meter, the exposure calculator designed by the late Elmer Harrold was easily one of the most popular on the market. It is still a thoroughly practical instrument for the calculation of exposure, and offers a valuable guide to exposure for those who cannot afford the expensive type of meter. Mrs. Elmer Harrold, 3103 Hudson Drive, Youngstown, Ohio, is at present selling out the remaining stock at a very reasonable price of \$1.00 each. You should send your order promptly for the supply will soon be exhausted.

Gevaert Papers

A beautiful rich printing paper is a thing dear to the hearts of all true photographers. If you are interested in unique and truly beautiful printing papers you

should not fail to investigate the several distinctive papers offered by The Gevaert Co., of America, Inc., 423 West 55th St., New York, N. Y. It is this organization which has given us the truly marvelous Gevaluxe paper, which gives prints of a texture and quality very much like a true Fresson print, by ordinary bromide printing procedures. Another very distinguished paper in this line is the platino-gravure surface, designated as K33. By all means write to the above address and ask for the complete catalogue and price list which will be sent to you free of charge.

Print Contest

The Eastman Kodak Stores, 1918 Broadway, Oakland, Calif., announces a print contest with monthly prizes in cash of \$10.00 for first prize, \$5.00 for second prize, \$2.50 for third prize and two certificates of merit. Awards will be made on the 5th day of each month, and the selection will be made by a competent jury of three. Pictures which have won prizes in other contests are barred.

Pictures may be of any subject, and prints may be either contacts or enlargements. Send print only, all prints submitted become the property of the Eastman Kodak Stores, none can be returned. Address prints to: Monthly Picture Contest, Eastman Kodak Stores, at the above address. Entry blanks and further information will be sent on request.

Defender Tri-Pac

Defender Photo Supply Co., Rochester, N. Y., announce the perfection of their new Tri-Pac film for natural color photography. This film can be used for making three color separation negatives with any standard camera which will take cut film. The accuracy of color separation is said to be very high, while the film has an emulsion speed rating of Weston 3 to photoflood light, with which no filter is required, and Weston $1\frac{1}{2}$ to daylight when the Wratten 86B filter is used. This filter is required for daylight exposures. Tri-Pac consists of three separate films. The first film is blue sensitive and is placed with the emulsion side away from the lens. This film contains a yellow dye

which passes only red and green light. The second film is green sensitive and is placed directly behind the first with the emulsion facing the lens so that it is in optical contact with the first and there is absolutely no loss of sharpness in these two films. The second film has a red coated back which passes only red light and also acts as an anti-halation coating. The third film is red sensitive and is placed with emulsion side toward the lens. It is also non-halation backed. There is a slight softening of the definition in the red sensitive film, but this is kept at a minimum by using a very thin film base for the blue and green sensitive films. The units of Tri-Pac film can also be used for negative making in the single exposure, single mirror type of color camera.

A postcard sent to Defender Photo Supply Co., Rochester, N. Y., will bring you a pamphlet giving full working details.

Champlin Developers

The Chemical Supply Co., 6324 Santa Monica Blvd., Los Angeles, Calif., offers two useful services to many photographers who are using the Champlin Fine Grain Developing formulas. Many photographers in the smaller cities have difficulty in obtaining the necessary chemicals—the Chemical Supply Co., will furnish the highest grade in any quantity desired. Other photographers prefer to buy their developers ready mixed in order to save time. For these the Chemical Supply Co. offers the Champlin formulas ready for use. They will supply not only the number 7 and 9 developers previously described in this magazine but also the new No. 15 formula, the details of which are first disclosed in Mr. Champlin's new book "Champlin On Fine Grain" to be published the 25th of this month.

The Second Rolleiflex Salon

Users of Rolleiflex, Rolleicord, Heidoscope and Rolleidoscope Cameras will be glad to learn that the SECOND ROLLEIFLEX SALON AND EXHIBITION will soon be on its way.

The first Salon was instituted approximately two years ago. It proved amaz-

ingly successful in demonstrating to the photographic public the remarkable versatility of the Franke and Heidecke cameras and at the same time attested the ingenuity of their users. A selected group of the prints from that show has been "on the road" ever since.

Because of the constantly increasing interest in these fine cameras as evinced by the outstripping of all previous sales records, "It was thought," states the importer, "that a second show would be in order."

Roughly, the prints submitted will be grouped in four primary classifications. Pictorial, Portrait, Technical and News Pictures. First prizes of \$50 in cash will be awarded to the makers of the best print in each group. Twenty-five dollars will be awarded the prints selected as second best. Provision is also being made for the awarding of twenty-five honorable mention certificates. An additional prize of \$100 will be given to the maker of the best picture, to be chosen from the first four prize winners, thus making it possible for some lucky individual to win a grand total of \$150 in cash. A mark worth shooting at, to our way of thinking.

The judges will be Colonel Edward Steichen, Dr. F. M. Agha, Art Director, Conde Nast Publications, and Mr. T. J. Maloney, Editor, U. S. Camera. Their conclusions will be considered as unequivocal, final and binding. Prints will be placed on exhibition for a period of about ten days—and at Rockefeller Center most likely.

The purpose of this Salon is to stimulate an interest in high photographic endeavor among users of Rolleiflex, Rolleicord, Heidoscope and Rolleidoscope cameras by rewarding them for superior excellence in their chosen medium.

All Rollei users who are residents of the United States or its possessions are cordially invited to enter the competition. Up to 4 prints may be submitted. These should not be smaller than 8x8 inches and since 11x14 inches has practically become the standard size for exhibition work in this country, prints in this size would no doubt be preferred. Uniform mounts on plain white or cream stock, 16x20 inches.

are requested. Data pertaining to camera, film, exposure, paper, etc., should be affixed to the back of the mount. Entries will be accepted until May 7th.

All communications regarding this contest should be addressed to Burleigh Brooks, Inc., 127 West 42 Street, New York.

Nicholas Haz to Give Courses in San Francisco

On January 29th Mr. Haz spoke before the Photographic Society of San Francisco, and we can say without exaggeration that we have seldom listened to a lecturer who commanded such complete attention from his audience. There is a reason for this. Mr. Haz has worked out a system for imparting a real understanding of what is meant by composition, that is peculiarly fitted to the needs of the amateur photographer. It not only gives him a basis upon which he can build his pictures, but it also makes it surprisingly practical for him to criticize and analyze his own work. Mr. Haz believes, rightly we think, that the photographers own taste and feeling should govern the arrangement of his work, rather than a set of dogmatic rules learned by rote. It is the object of his lectures, as well as his course, to develop that taste and feeling in each student. The Haz courses will open in San Francisco and the East Bay about March 8th. The fee for the course is \$25, the number of students in each class is limited to eight. All interested persons should communicate immediately with Mr. Roland Calder, Trainer-Parsons Optical Co., 228 Post St., San Francisco, or with the office of this magazine.

Ultra-Violet Lamps for Printing and Enlarging

Cleve-Tech Service Co., P. O. Box 2262 Cleveland, Ohio is offering ultra-violet tubes of a single grid shape, and of clear glass for use in printing boxes and enlargers. Over-all dimensions range from $3\frac{1}{2} \times 4\frac{7}{8}$ " to $11\frac{1}{2} \times 16$ ", and these sizes will cover negatives from $2\frac{1}{4} \times 3\frac{1}{4}$ " size up to 10×12 ". The transformers which are supplied with standard units are to be used on 110 volts, 60 cycle A.

C. current. For other voltages and frequencies special transformers are required at additional cost. The units complete with transformer and cable are priced from \$8.95 for the smallest, upward. Write to the above address for full information and catalogue.

Camera Bargain

Willoughby's, 110 W. 32nd St., New York, N. Y., is offering a most unusual camera bargain—a Voigtlander Brilliant at \$7.50. This camera is a twin lens reflecting type of camera in simplified form. The image is seen full size on a ground-glass and is visible at all times, even during exposure. There is no focussing since the camera is readysset. Twelve pictures $2\frac{1}{4}$ " square are obtained on a standard eight-exposure No. 120 roll film. The Voigtar anastigmat lens has a maximum aperture of F:7.7, the automatic shutter has speeds of 1/25th, 1/50th and bulb. Regular price of the camera is \$12.50.

Third International Leica Salon

The Third International Leica Salon is currently on exhibit as follows:

Providence, R. I.—Monday, March 1st to Saturday, March 6th inclusive.

Illustrated Lecia Lecture — Faunce House Theatre, Brown University, Wednesday, March 3rd at 8 P. M.

Boston, Mass.—Monday, March 8th to Friday, March 12th inclusive.

Parker House, Hawthorne Room.

Hours: 11 A. M. to 9 P. M.

Illustrated Lecia Lecture—Wednesday, March 10th, 8 P. M., Boston City Club.

Argus Candid Camera Invades Europe

With the stepping up of production of the Argus Candid Camera by the International Research Corporation, Ann Arbor, Michigan, definite plans for export business have been completed.

Mr. C. A. Verschoor, president of the company, has just returned from an extended trip to Europe where he appointed Wallace Heaton, Limited, as distributors for London, and L. A. Leigh & Company as distributors for the balance of England, Ireland and Scotland.

The appointment of foreign agents for the Argus Candid Camera were also con-

cluded for Belgium, Holland and France, and a foreign office was established by the International Research Corporation at 57 Boulevard Botanique, Brussels, through which all European business will be handled.

It is interesting and significant to point out that the European popularity for the miniature type camera is being matched in this country. Sales of the Argus camera have grown steadily month after month.

The volume of cameras now being sold is definite proof that this type of camera is appealing strongly to the average camera user and is not limited to the strictly photographic enthusiast.

You can see this remarkably efficient and economical camera at your dealers' or obtain full information from International Research Corporation, 145 Fourth Ave., Ann Arbor, Mich.

Our Book Shelves

Champlin on Fine Grain, by Harry Champlin. Published by Camera Craft Publishing Co., of San Francisco. 160 pages, 5¼x7¾", cloth bound, price \$1.75.

One of the difficulties which have always confronted the Minicam who was striving to satisfy himself as to the best means of obtaining fine grain negatives, is that information on this subject was usually fragmentary—presented in the form of magazine articles or short chapters in books, in each case failing to deal with the subject in any thorough fashion. Mr. Champlin has ended all that with this book. He begins by laying down a definitive system for the practice of fine grain processing regardless of what formula may be used for the actual development. He then reviews in concise yet thorough fashion all the important contributions which have been made to solving the problem of fine grain, and evaluates these contributions, stating exactly what may be expected with each type of formula that has been suggested. He then outlines the experimental procedure and the reasoning through which his own formulas were arrived at, again stating exactly what may be expected of each formula. The most important part of the book from the point of view of the amateur who is interested primarily in results, is the discussion, analysis and explanation con-

cerning Mr. Champlin's new formula No. 15, which is published for the first time in this book. The objective of all Mr. Champlin's experiments has been to combine in one developer, fine grain, good gradation, and high emulsion speed, for these are the prime essentials for good miniature camera work. How completely he has succeeded may be judged by the fact that this developer does give fine grain and good gradation coupled with an emulsion speed rating to daylight of Weston 64 for such films as Eastman Super X and Du Pont Superior. These films are usually rated at Weston 32 to daylight in a normal developer such as D-76. In the opinion of the writer each Minicam owes it to himself to give this developer a thorough trial. A complete listing of film emulsion speeds for D-76 and Champlin No. 15 to daylight and for Champlin No. 15 to artificial light is given in Appendix A. Accompanying the listing of each film is a key which when compared with the information given in Appendix B, gives developing times for all films in the various developers listed therein. Appendix C contains a list of the chemicals used in fine grain processing with an explanation of their action and their chemical properties. In short this is the first really complete book on fine grain processing and it also reveals for the first time a new formula offering great advantages to the miniature worker.

CLASSIFIED ADVERTISEMENTS

Rate: 6 cents a word: minimum \$1.50 each insertion, prepaid. This is purely a convenience department for the reader and for that purpose offers Classified Advertisements at cost. Dealer merchandising ads must be placed in display space at 35 cents per agate line. 10 agate lines minimum. Position Wanted ads, one insertion free. Copy for this department must reach us on or before the 15th.

Items advertised in these columns may be purchased C.O.D. subject to examination and C.O.D. subject to ten days free trial if sent by express. If in doubt, safeguard yourself.

OUTFITS FOR SALE

◆ Small Rolleiflex. Tessar 2.8, Eveready case. Perfect condition. \$75.00. V. G. Schwarz, Box 467, Tulsa, Okla.

STUDIOS FOR SALE

◆ Partner wanted in well-known downtown San Francisco Studio, ground floor location. Excellent opportunity. Going East, will sell reasonably. M. H. E., c/o Camera Craft, 425 Bush St., San Francisco, Calif.

◆ Opportunity to buy one of the best known studios on the Pacific Coast. Modern equipment. Excellent ground floor location. Large negative file. Splendid business opportunities. Cheap for quick sale. Reason for selling, health. S. M. P., c/o Camera Craft, 425 Bush St., San Francisco, Calif.

OUTFITS WANTED

◆ Stoneware 8 Exposure Developing Tanks. Quote best cash price. C. H. Hansen, 207 E. Chicago St., Valparaiso, Ind.

◆ #48A—11x14 Eastman Studio Outfit. Will buy either complete outfit or camera only. R. D. G., c/o Camera Craft, 425 Bush St., San Francisco, Calif.

LEICA BARGAINS

28 mm. F:6.3 Lens. Scarcely used	\$65.00
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"Auld Reekie, Edinburgh"

Capt. Alfred G. Buckham, F.R.P.S.

Pictorial Photography In The Skyway

Capt. Alfred G. Buckham, F.R.P.S.

NOT without considerable hesitation do I proceed to give advice upon aerial photography for my solicitude upon behalf of enquirers has brought me more kicks than ha'pence. Just now I am feeling particularly sore from the assault of an Egyptian gentleman who, having determined to venture his person into the skyway in an initial flight, was wishful at the same time to produce a pictorial record of the momentous occasion. "I desire," wrote he, "with much enthusiastical feelings to take photos with similarity to those which is of your own distinguishable productions". Then followed on a formidable number of questions concerning choice of apparatus, exposure, development, etc., etc., to all of which I religiously replied; an accomplishment which engendered feelings of inordinate goodness and altruism. But later on I was completely shattered by another communication from the Egyptian gentleman which, in part, ran as follows: "I have followed your instructive to a remarkable degree with complete complicity and what is the result I must state. It is nix. For what should be pictures full of admiration are simply smeerings and tremblings on the plate and I have knowledge that of your jealousy to keep to yourself you have told me wrong. I command that you repay me my spendings". He enclosed a bill for nearly two hundred dollars. Hence I do beg of you for more merciful treatment should you get nothing more than "smeerings and tremblings" on your negatives as the result of following out my instructions "with complete complicity".

It may be taken for granted at the outset that if one cannot readily obtain good photographs when standing on the solid earth, it is hopeless to attempt operations along the skyway from a swaying or bumping airplane with the pictures flowing by at a hundred or more miles an hour. Unfortunately for the budding aerial photographer the work becomes less easy of accomplishment year by year owing to the stupid craze for "saving time" which demands faster and still faster machines. If the time of the people whose time is thus saved was really worth saving one

could endure it all with some degree of resignation. But, alas, on making their acquaintance one realizes that even the consolation is denied. And so it must be confessed that the golden days of flying are gone; days when it was possible to spend half an hour climbing to 5000 feet, there to meander along at about sixty miles an hour while the great cloud banks lazily drifted by, and time there was to pick and choose a subject for the camera. Therefore the first consideration must be to select the slowest airplane available, remembering that the slower you go the greater are your chances of success.

Successful pictorial aerial photography is quite easy of accomplishment providing you can recognize what constitutes a picture immediately it is presented to you, and that you carry through the few simple manipulations of your camera with the greatest possible speed. For it so frequently happens that a series of pictures will follow on in rapid succession after flying perhaps a hundred miles or more without meeting one temptation to fire the shutter. Hesitation and fumbling in these respects, at what is understood to be "the psychological moment", are faraway the chief causes of failure; but fortunately it is not necessary to undertake expensive airplane flights to obtain the experience and practice which alone can cure those fatal defects. Wherever one travels, on foot or in automobile, one should be continually on the alert selecting just those bits in the passing scene which provide the material for well composed pictures; it is a pleasant pastime and eventually becomes a delightful habit. How often when leading a party of photographers on a country ramble in search of pictures have I seen them excitedly running to and fro, and tumbling over each other's tripod legs, when a lovely but fleeting lighting effect has suddenly appeared in the landscape before them. All were anxiously seeking for "the best viewpoint", but by the time they had found it Nature had moved on.

The manipulation of the camera must become as automatic and easy as the act of breathing, requiring no conscious thought in the doing of it. On a day of fickle weather, when the actinic value of the light is continually changing, take your camera to some elevated spot, a hilltop or a skyscraper, where there is a clear view right away to a distant horizon, and there practice handling your camera with that incredible speed with which (so I am credibly informed) the he-men of the woolly West handle their guns. Start off with the assumption that you are loaded up with ultra rapid plates or films, set the shutter speed at 1/200th second, and if the light be fairly good stop the lense down to F:6, then proceed to take imaginary photographs, not in flurried haste but with careful rapidity, watching with utmost concentration for any variations in the value of the light. Should it become greater, further stop down the lens, or less, open out accordingly; but never alter the shutter speed unless the light becomes so poor that wide open lens aperture plus a lower shutter speed is needed to ensure a fully exposed negative. All this solemn rehearsal will, of course, appear to brightest intellects as a needless performance for old-timers in photography to pursue, but any success I have achieved during twenty years' experience of this branch of work has been due in the main to the rapidity with which the camera is handled and the quick estimation



"The Lonely Sky"

Capt. Alfred G. Buckham, F.R.P.S.

of light values. Even now, after a period of idleness, before setting out on an important task, I put myself drastically through the prescribed exercises, knowing that the best way to ensure success is to practice for it.

The Camera. One can well imagine that the average amateur seeing the formidable looking and expensive weapons employed by many professional aerial photographers would be deterred from even thinking that the work came within the bounds of his possibilities. However, except for the purpose of mapmaking, when the camera is securely fixed pointing downward through the floor of the airplane, no special apparatus is really required, as I discovered of necessity in the early days of the Great War, when the only cameras available were those used for ordinary fast ground photography. It is apparent at once, of course, that when photographing from an open cockpit the unprotected bellows of such a camera cannot be subjected to a draught flowing by at something like a hundred miles an hour. The most suitable camera in everyday use is the type chiefly employed by newspaper photographers,—not the reflex, which is too bulky—but the more compact instrument which is used at eye level and is provided with a direct vision view finder. Two pieces of sheet aluminum must be obtained and fixed on each side of the extended bellows; they should slip between the wooden framework of the camera where the bellows are affixed to it, and extend as far as the lense panel. The frail bellows are thus protected from the wind, which falls instead upon a rigid surface. These metal side plates can be securely attached in position in several ways, either by screwing direct on to the lense panel, clipping on to the supporting struts of the bellows, or by means of two metal strips, the ends of which to an extent of one inch are bent to a right angle, and these, bridging across the bellows top and bottom, are secured to the side plates with small nuts and bolts. The latter method appears to be the most satisfactory. A camera which will withstand the rough and tumble of arduous flying and come through it all unscathed, is an oblong box of wood with a lense at one end and the plate or film holder at the other. Such a contraption I used throughout the War and it is still my most trusted servant in these piping days of peace. The wooden structure is strengthened and prevented from warping by stout strips of brass running lengthwise and transversely.

The Lense. For really artistic landscape photography at ground level any odd piece of glass will serve by way of a lense, but, personally, I do not find that lack of sharp definition in aerial photographs contributes in any degree toward improving their pictorial qualities. Consequently I would suggest that sharpest definition should be aimed at, remembering that the soulful mysteriousness which some folk find is imparted to their work by wooliness of outline can always be introduced during the process of enlarging by placing one or more thicknesses of chiffon over the lense according to the amount of soul required. A good lense working at F:4.5 open aperture therefore seems to be indicated; larger apertures are very seldom required and possess a decided drawback; for an 8" lense working at F:3 is a hefty contrivance, its weight putting the camera right out of balance and calling for the muscles of a Hercules to hold it in steadiness. In general use I employ an 8" lense on a 5 by 4 plate.



"Skyscrapers"

Capt. Alfred G. Buckham, F.R.P.S.

Courtesy, Fortune

The Shutter. There is no doubt that a good focal plane is the most reliable and efficient, moreover the release is handy to come by. A knob to press is preferable to a trigger to pull, and working parts should be kept well oiled with a thin lubricant—sperm oil with a dash of paraffine is my own concoction—for it is to be borne in mind that a shutter running smoothly on the ground is inclined to become sluggish at ten or more thousand feet altitude. An experience in this connection will convey a salutary warning how the best laid plans may go agley if sufficient care be not paid to apparently unimportant details. Starting from a Mexican airport in a shade temperature of ninety degrees, after rehearsing with satisfaction the customary tests to ascertain that both shutters were working up to schedule, I arrived over the volcano Popocatepetl at 19,000 feet in a temperature somewhere round zero. The first exposure into the crater, with the camera pressed hard against my face, elicited the information that things were not behaving rightly. The roar of the engine effectually drowned the shutter click but the slick vibration usually announced on my cheek by a true $1/250$ th sec. was missing. A rapid investigation showed that the shutter had slowed down to about $1/25$ th sec. due to coagulation into the consistency of glue of an unmentionable brand of South American lubricating oil, and it became necessary to increase the indicated speed to $1/1000$ th sec. in order to overcome the trouble.

Light Filters. It is the height of wisdom to use only those recommended by the makers of the plates or films employed. They should not be mounted in glass, but in the form of dyed gelatine film, cut to the required circular size, inserted between the components of the lense. For all landscape work, or when sky and landscape are both included in the subject, a deep filter is preferable; but for cloudscapes alone it is better to discard the filter altogether because it will be found in practice that it often renders the blues too dark, and generally increases contrasts to an unpleasant degree. Cloud photography from ground level, when the clouds are a mile or so distant from the camera, calls for the use of filters; but away up in cloudland it will soon be observed that the blue of the sky is almost invariably more intense, and the shadows cast among the cloud masses are opaque and dark, being at times so devoid of light that when flying through them it is impossible to read the instrument board.

The View Finder. A most important item in the equipment yet so often quite inadequate to its purpose. To be a real aid in picking up and composing the subject rapidly it should be the same size as the plate. It is best comprised of a stout wire rectangular frame provided with two thin wires soldered on to the frame so that they intersect in the middle; at the point of intersection an appreciable blob of solder is fixed to indicate at the moment of exposure the exact center of the subject photographed. This enables one readily to place the chief interest a little to the right or left of the center. The spring holding the frame erect must be exceptionally strong to counteract the force of the wind.

Plates or Films. No inducement except personal experience that films are capable of giving nearly as good results as plates, particularly under



"A Stormy Day"

Capt. Alfred G. Buckham, F.R.P.S.

trying climatic conditions, would tempt me to use them for aerial work, despite their immense advantages in respect of bulk, weight, and freedom from breakage. The trials and tribulations incidental to carrying sixty dozen pieces of glass through the skies on a recent journey of 17,000 miles was an experience well calculated to shake all but the most robust of convictions. But space (and probably the Editor) forbid further pæons in praise of plates, except perhaps to add that the double coated Panchromatic brand procurable in the U.S.A. are not to be surpassed. During hot weather a hardening bath before development must never be omitted.

The open cockpit of a not too speedy airplane affords better facilities for working than a cabined plane. When the best weather conditions prevail for pictorial photography the skyroad is disposed to be bumpy, descending and ascending currents of air moving beneath the big banks of cumulus cloud. A sudden drop of three or four hundred feet may be a little alarming if one is not prepared for it, and safety belts are usually provided for such emergencies. I wore this device during my first flight, but never again. The restriction of movement was unendurable; pictures abounded in a stormy sky, but my movements were about as lively as those of a poor lunatic confined in a strait-jacket. Since then I tie my left leg to the seat and move around with perfect freedom. The beginner might be more confident and comfortable in the cabin of one of the larger airplanes when making his first few attempts; and should trouble then arise through other passengers objecting to the draught coming through an opened window, the photographs may be taken through the glass if the lense is held very close to it. I once took a series of very successful photographs in that way when being hustled out of a certain country with cameras sealed up and windows locked. While the Army pilot was not looking I produced a small pocket camera and photographed his wretched country. In truth it was a very wretched country.

Contrary to the advice so often given for securing pleasing effects upon the ground, aerial landscapes should not be taken against the light, for the results are in the great majority of cases flat and monotonous, with every reflecting surface recording as a hard, white blob. A side light, a little to the rear, produces the most satisfactory negatives. Among the clouds, however, the procedure is practically reversed, the best effects usually being got almost dead into the light. Landscape exposures are rather less than those given for open and distant landscapes on terra firma, but the towering ships sailing in the ocean of the sky usually demand double the exposure given from ground level, for here they are close up, and shadows are dark and deep.

Fully half of my exposures are made with the greater width of the plate vertical, because it seems better to emphasize the towering height of the clouds rather than their breadth. But at times, when the subject demands it, the landscape is photographed upon what is usually called "the landscape way" of the plate and then a second plate is exposed in rapid succession for the sky alone. A combination print is later produced from the two negatives in the manner so often described.

Unfortunately, Nature does not always surmount her landscapes with

clouds such as will compose well, as a whole, in the picture space, consequently I have provided a store of over 2,000 cloud negatives for such contingencies and from this suitable clouds for combination purposes are selected. And here is just where the hasty or unobservant worker may go badly astray, producing incredible and even appalling results. For the lighting of the landscape must be in correct relation to the light coming down from the sky, and heavy cloud masses insist that they shall have corresponding shades upon the earth. Selection of the right negative for the purpose may entail the careful inspection of fifty or more, and on the print some handwork with a chemical reducer and stumping chalk, or other medium, is usually required to bring the whole into harmony. So before venturing upon combination work it is surely wise to serve some years of apprenticeship sketching and painting in the open air, which happens to have been my own way of approach to photography.

The principles to be observed when making pictures of aerial scenes are not different in any respect from those so lucidly set forth in the pages of CAMERA CRAFT for other subjects. Only geniuses, real or make-believe, depart from them. Attention must be concentrated upon a principal object, whether it be a building or group of buildings in a city, a beautiful passage of light and shade, or atmospheric effect in Nature; but essential to success along the skyway is extreme readiness to photograph directly a position is reached where the lines, and the masses of light and shadow, offer to the eye an harmonious composition.

The Modern Studio

Kem Weber

THE shallow showcase on the garden fence with wrought iron scroll work as beautification, lined in black velvet, maybe a picture or two in it—the name and the announcement that a photographer is willing to take a portrait. A bit of garden walk, a doorbell, then the artistically arranged reception room (Turkish or otherwise), many curtains, dusty, and from behind the folds peeks the smiling photographer—"Please!"

Skylight overhead with grey muslin shades fastened with rings on wires to be pushed back and forth with a bamboo stick—a lovely painted backdrop in greys depicting a balustrade with a post on one end, an urn with flowers, and hazy foliage in tones of gray. The renaissance chair,



Front of Studio

evolved through the imagination of the early machine age, upholstered in tapestry; an artificial palm, many rugs and draperies, and a marble top table with cast bronze base, and a volume of "somebody's" poems; a little doll on a stick with bells to make children smile. The woman sits down—the man stands straight behind her, and the operation begins.

Roughly speaking, this has been the romance of photography for many years and family albums throughout the country are filled with the results, hand colored or otherwise.

Now, photography has become a science with a strong ambition to make art mechanically and in some instances we see forerunners of the next step in which science and technique in itself will be refined into an aesthetic beauty. The camera can do things which no painter can, and men behind these cameras are recognizing that painting is no inspiration for their craft and that the fast lens and modern lighting are tools which cannot be held within the limitations of brush or pencil. This realization helps the painter as well to search for more than mere photographic realism and helps the operator behind the camera to learn more of the possibilities and limitations of this new medium as an expression in art.

It has been my privilege and pleasure to assist Will Connell and C. K. Eaton in the setting up of their respective new work shops and the problem has been as inspiring to me as travel is to the explorer into some unknown territory.



Will Connell's Studio. At left, looking downward from the great curve at end of studio. At right, view inside studio with model, camera, lights, and props in position.

There was no room for the application of art or decoration within a given space, but it was purely a question of untangling the many requirements into logical simplicity. There still had to be a form of advertising on the outside; there still had to be a reception room, and there still had to be a studio, so the advertising became an up-to-date store front . . . the reception room, a modern office . . . and the studio, a machine room.

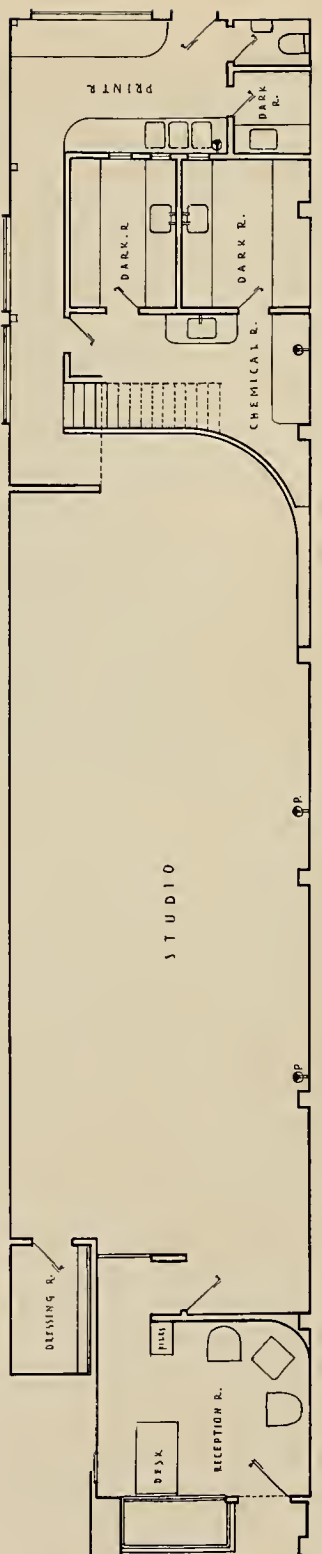
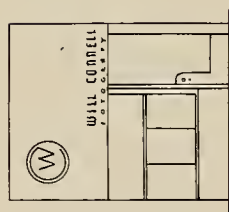
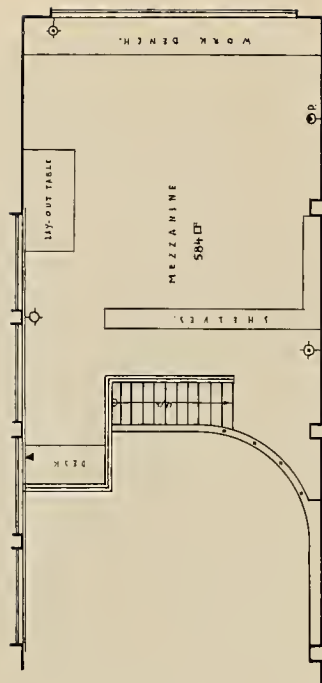
The former kitchen sink grew into four individually equipped dark rooms, a chemical room, a print room, a place to make layouts with a well equipped library. A work shop to make immediate adjustments of settings or mechanisms, and the whole is a constantly changing mass of apparatus and staging held together by strong governing divisions of space and color.

The modern equipped studio must allow the operator to make shots out of a pit or from the ceiling down. The walls themselves should incorporate various basic and major forms, differentiation of surface, and texture. The floor should be a simple wood floor for set building. It should be easily transferable into linoleum or marble, stone or tile—whatever the immediate problem requires. Changeable walls have grown out of a simple painted backdrop into actual moving picture sets which may represent a corner in the kitchen or bathroom today; the lounge, boudoir, or library tomorrow.

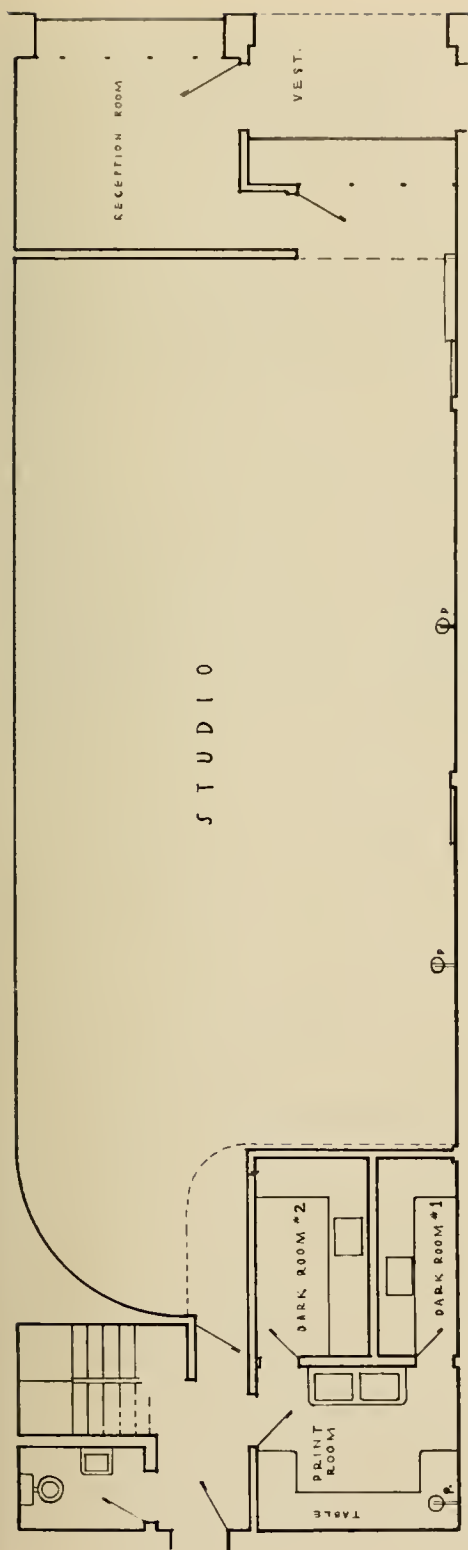
Definite flexibility for setting is as essential as flexibility of high powered illumination. High voltage wiring must be available in all parts and when rain is required, the ideal studio should produce rain, running water in the bathtub or shower.

The laboratory department, printing department, the tool room and dark rooms, all must have full equipment and good circulation of air. Sliding panels to connect the various dark rooms with one another and telephone connections throughout. All in all, the modern photographer is equipped like a modern factory.

As much as this all sounds most mechanical, if well done it will still be beautiful for the same reason that a mechanically taken photograph can have artistic value, not alone by its subject matter, but more so by the recognition on the part of the operator that he deals with space, form and



Floor Plan Will Connell's Studio



Floor Plan, Studio of C. K. Eaton and A. R. Bletsch



The Studio of C. K. Eaton and E. R. Bletsch. At left, [front of studio. At right, view inside studio, notice the treatment of the walls.

color, and that balance and composition and aesthetic beauty is everywhere to be found by those who (by training and aptitude) can see it and by right handling of their tools develop it.

Both of these studios were designed within the limitations of street level store space dimensions as shown in the blueprints. In the case of Will Connell, display window advertising was of minor importance as he does not depend upon street traffic for his patronage. The studio front, therefore, is small and acts more as a business card than show window display.

The reception room is also the business office holding the desk of the secretary, office files, and also functions as a waiting room. A red warning light, between the outer office and studio proper, prevents interruption during the "shooting". The ceiling in the outer office is lowered, the space above being used for storage of props. Illumination is accomplished through indirectly reflected lights. The telephone switchboard is in this outer office. The main studio is dark without daylight, mechanically ventilated. The problem here is to create background facilities for various "setups". So, I introduced round corners and set-backs; made part of the ceiling and part of the walls black, and the remaining surface different values of gray. The store space had concrete floor and there was not enough money available to put a wood tongue and groove pine floor on top. This would have had advantages to fasten easily the movable props to the floor. As it is the floor is now painted in a brown red. An important feature for such a workshop is the wiring facilities to take care of high powered voltage in various places. Lights are constantly moved about and the character of the room is supported by heavy insulated cables which shift about with the lamps. A cable rack with shelf space above for connection attachments, a parallel, straight and curved screens, backgrounds, model platform, and the necessary electrical equipment give the place the atmosphere of activity, picturesqueness, and yet is purely functional.

The large wall, floor, and ceiling surfaces, and the strong color division



The Camera Pictorialists of Los Angeles, make a night of it at Will Connell's Opening Those present: (1) Robert Officer, (2) Don Keyes, (3) R. C. Lewis, (4) Harry Crawford, (5) Steven Hansen (guest), (6) Karl Struss, (7) Franklin Judson, (8) Bill Clum Jr. (guest), (9) Milton Inman, (10) Host, Will Connell, (11) Jules Cobb (guest) (12) Guest, (13) Kirby Kean, (14) Lynnton Vinnette, (15) Charles Kerlee (16) Owen Shrader, (17) Larry Lewin, (18) C. K. Eaton, (19) Roger Kelley, (20) Herman Wall (guest), (21) Fred Dapprich, (22) Victor Matson.

hold everything together. In the rear, I built in a mezzanine floor of which the railing towards the main studio serves to place large flood lights in various locations. The mezzanine serves again as work-shop, library, store-room of plates and layout-room for compositions. It is well lighted by windows in the rear wall and incorporates work-bench, drafting table, etc. Underneath the mezzanine are the dark-rooms, print-rooms, and chemical laboratory and toilet facilities.

The Eaton portrait studio, though laid out in principles similar to the one described above, is much more homelike in its character. The colors are gray, gray-yellow and gray-green. There are again various background facilities all in a softer and more decorative treatment. The reception room floor is covered solidly with Broad Felt, a new carpet material laid down similarly to linoleum. The exterior has a large amount of display window space and serves definitely as advertising of the business. The dark-rooms and work-rooms are smaller due to the elimination of color photographic work in this case.

Camera Journalism For The Amateur Photographer

Jack Wright*

MOST articles in photographic magazines and elsewhere on "How to Sell Pictures to Editors" are written by gentlemen adept in the use of the camera but who know less than they should about the problems of the newspaper business. Here, then, is an article on the same subject by a newspaper man who knows less than he should about photography but who is all too familiar with the ins and outs of his own at times seemingly insane craft.

There is, in "camera journalism," a genuine field for the amateur photographer, particularly the one living in or near a city of 75,000 or larger. The demand of newspapers is for more and more pictures, illustrating every important event of the day, and yet it is physically impossible for even the largest newspapers to have a cameraman on the job at every happening.

To mention but one field open to the amateur camera journalist, take the subject of auto accidents. Such is the speed with which ambulances and towcars rush to the scene, and such is their efficiency, once they arrive, that newspaper cameramen do not have time to reach some of the most spectacular accidents before the injured have been placed in ambulances and the autos torn apart and hauled away.

The amateur cameraman who happens to be on the scene with a loaded camera will have an almost certain sale for at least one "shot".

The same thing is true of the earlier stages of spectacular fires and, in fact, of almost any event which has happened unexpectedly and without giving the editor time to rush his own cameraman to the scene.

One of the things which the outsider does not understand about the newspaper business is the overwhelming importance of the time element. Two hours do not seem of much importance to men and women in ordinary occupations but to the newspaper they are everything. A picture which is worth \$5, if in time for today's home edition, may be absolutely valueless an hour later, after that edition has gone to press. Occasionally a newspaper will print, tomorrow, a picture which should rightfully have appeared today, but not often. One of the first things for the amateur photographer to learn, therefore, is that days are short and editions are fleeting and it is essential for him to get into the newspaper office with his picture just as quickly as auto, streetcar or bicycle will let him.

This brings up the question of whether or not to develop your films

*Managing Editor, The San Jose (Calif.) News.



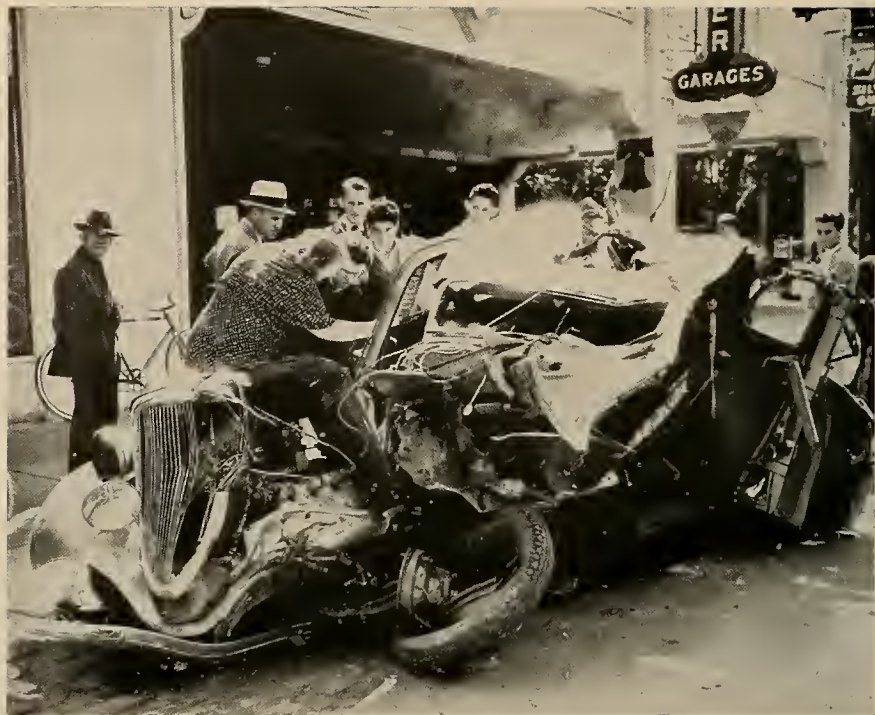
The advantage possessed by the photographer who arrives at the scene of a highway accident early is clearly shown in the above illustration. Ten minutes after this picture was taken the fire was burning much less spectacularly. Taken with a 4 by 5 Graflex at 7 a. m. Exposure 1-100th at F 6.3.

before submitting them to the editor. If you are equipped to do the job quickly, it will be all right for you to develop your own news picture films. For one thing, you will probably get a finer grain quality and a care in development which your films will not receive when "put through" in an ordinary newspaper dark room, which is geared to practicality and speed rather than to the nuances of photographic "art". Do not, however, attempt to develop your own films of important "spot news" events unless you can do the job with speed.

If you do your own news picture developing you will need to understand the technique of drying films in alcohol. This is not difficult, consisting merely in immersing the film, after it has been fixed and briefly washed, in pure alcohol. After leaving it in the alcohol for three or four minutes to absorb out the water, dry in an open window or in front of an electric fan. Newspapers are equipped to print from wet negatives but you will have less trouble in transporting your films downtown if they are dry and can be placed in an envelope.

Regarding the matter of making prints: Here, again, if you are equipped to turn out prints rapidly you will have a better article to sell if you can show the editor a finished print, rather than a negative. Do not waste much time making prints, however, as the newspaper will probably want to make its own anyway.

If you make prints, use glossy paper of a contrast grade. The blacks



Among the most fertile sources of news pictures for the amateur news photographer are auto wrecks. This picture of a badly mangled motorcar was taken with a 4 by 5 Graflex with an exposure of 1-100th at F 7.7.

and whites should not be violent, but they should be more contrasty than you would make up to hang in a salon.

It will be good practice for you to make a study of the sizes of pictures which newspapers ordinarily use. Roughly, it goes about like this: For pictures of one person, one column; for pictures of two persons, two columns; of three or four persons, three columns; of more than four persons, or of scenes at fires, wrecks, etc., four or five columns. Each column is the equivalent of two inches.

There will, of course, be wide variation from the above. Pictures of important persons will often run two or three columns, or more if they are of sufficient importance. The general rule is: The more important the person or event, the larger the picture.

In making your print, enlarge in such a way as to cut off the non-essentials. In pictures of persons the face is the important thing, except in the case of certain types of bathing girl and ship-board photos affected by newspapers, in which the leg seems to be the vital factor. In general, make the face large at the expense of the arms and legs. It is assumed that a person has arms and legs, therefore it is not always necessary to include them in the photograph.



Among the most spectacular news pictures are those taken at fires, and the amateur can get them just as well as the professional. This scene at the burning of the Santa Clara County Courthouse was taken with a Speed Graphic, 1-200th at F 4.5.

In photographs of scenes follow the same rule, enlarging the colorful and dramatic portions of the negative and cutting off the unimportant. This heightens dramatic values, and if formal composition and balance are sacrificed, remember that in news pictures the "story" is the important thing and not photographic beauty.

That does not mean, of course, that newspapers have no use for pictures that are photographically lovely. You will often find, in rotogravure sections, pictures, the news value of which is small but which are of great photographic beauty. However, in seeking pictures of this type, try to find subjects that are recognizable scenes in your own city, for newspaper readers are much more interested in views of their own community than they are in pictures of places elsewhere.

Night photography offers real possibilities along this line, it being possible, by means of a tripod and long exposures, to get entirely new impressions of buildings and scenes which are commonplace by day. Such pictures are not as salable as "spot news" pictures but allow more time in their production.

In addition to the newspapers themselves, the syndicates which supply pictures to newspapers afford a fertile field for the sale of good news photos. Each year they pay tens of thousands of dollars to free-lance photographers for pictures of the type they desire.

Notable syndicates of this kind are the Newspaper Enterprise Asso-



Train wrecks are infrequent and all the more sensational for that reason. This shot was taken at 9 a. m. on a dull morning with a 4 by 5 Graflex, 1-100th at F 6.3.

ciation, Inc., of Cleveland, Ohio; International News Pictures of New York City, and Central Press, also of New York. All of these have branch offices in all parts of the country, the addresses of which you can probably get by applying to your local newspaper editor. It is better to deal with the branch nearest you, in order to save time.

The pay for pictures sold to syndicates is not large, being about \$3 for average "shots" and more for exceptional ones. However, it adds up, and in time may develop into a fairly remunerative connection.

I am not, of course, guaranteeing that you will sell the first picture you offer. You probably will not, and you may not sell any of the first twenty. The taking of news pictures is a craft definite and distinct from ordinary photography, and it is not to be expected that it will be mastered in a day or a week. All that I am suggesting is that the study of the way newspapers use photos—the types of pictures they use, their size and the way they are trimmed—can afford much of interest to any amateur photographer and that, for those who have talent and are persistent, there is money in news pictures.

And for the miniature camera fan this additional word of cheer—you will not have to worry much about graininess, so long as your pictures are sharp and contrasty. A newspaper engraver's screen of 55 dots to the inch, thrown over your picture, will effectively "kill" whatever grain there may be.

Dry Mounting On A Wet Night

Dorman Miner

○ N a wet winter's day two and a half years ago I went to a metal shop and purchased a sheet of aluminum, one-quarter of an inch thick, and $11\frac{1}{2}$ by $14\frac{1}{2}$ inches in size. I specified a flat, smooth piece, cut square. It cost \$2.25. I chose aluminum because its has high thermal conductivity, that is to say it takes and gives up heat quickly.

There comes a first time in the life of every photographer when he desires to mount a large print. It had come to me. Lacking a dry mounting press, not to mention the price of one, I resorted, consecutively, to paste, mucilage, glue, rubber cement, and several derivatives. I stuck everything in reach to its neighbor, including the seat of my pants to my chair, but I never did stick that print to a mount.

Examination of the literature showed that dry mounting tissue was highly recommended. It seemed there was no comparison between it and other mountants. It had, furthermore, the unusual (in photography) virtue of being very inexpensive. So I bought some.

But there was a catch in it. You had to make it stick first. Following the recommendation of some very optimistic persons, including the tissue manufacturers, I tried the family flat iron. All the good I got out of it was that I found out why it is sometimes called a "sad" iron. Is surely is the world's poorest substitute for a dry mounting press.

The situation called for analysis. I reasoned that the mechanics of the use of dry mounting tissue were simple enough. Dry mounting tissue is thin tissue coated on both sides with the black sheep of the shellac family. When placed between a print and mount and melted with heat under pressure the tissue sticks, on one hand, to the print and, on the other hand, to the mount. (Says you!)

With certainty that I could somehow meet them if I knew just what the requirements for success were I formulated the following rules:

1. Heat and pressure should be applied evenly over the entire surface of the print with one dwell only.

2. The degree of heat should be within certain limits but in no case should it be at the "siss" point. When the surface of a heated iron "sisses" it is at or exceeds 212° F. Such heat will ruin any unhardened print and most that are hardened; besides, no tissue requires so much heat. Any good tissue will melt at 140° F.

3. Some pressure but not great pressure is necessary. Probably one pound to the square inch is adequate if the heat is approximately correct.

4. Once the tissue has been melted with heat under pressure *the*

pressure must be left on entirely undisturbed until the tissue has cooled and set.

Obviously, no flat iron could meet these rules on a large print. (I am aware that with commercial dry mounting presses the work comes out hot. But the recommendation, so frequently seen, that such work be placed under new pressure for a time is evidence that handling hot work is a prolific cause of failure.) I needed something else and found it in the aluminum plate first mentioned. I took that plate home that rainy day and, step by step, proceeded as follows:

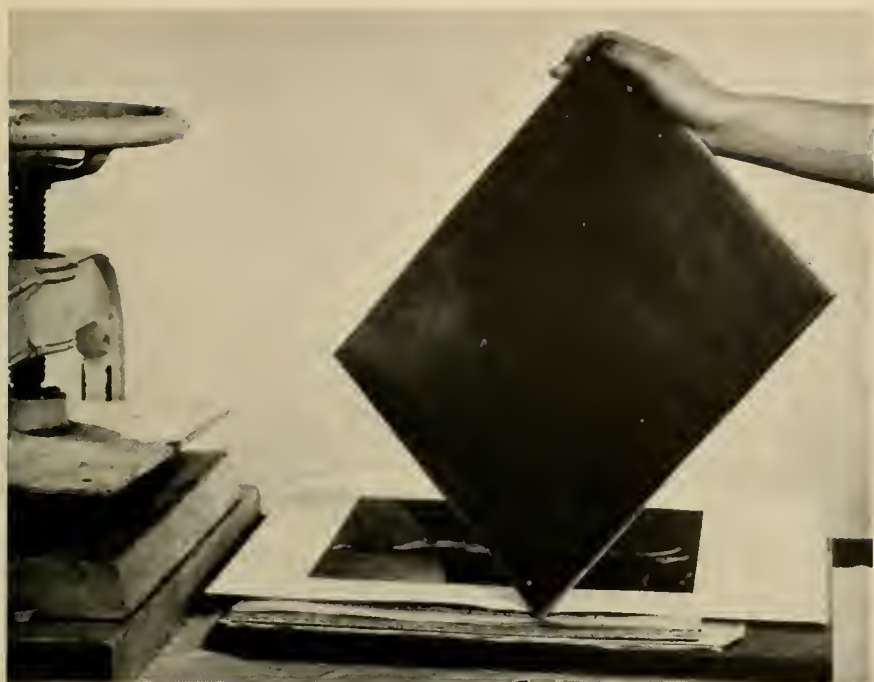
1. Ate a good dinner;
2. Got out a drawing board, a carpenter's square, a sharp knife, and some mounting stock and cut a mount 14x17 inches;
3. Attached a piece of 11x14 dry mounting tissue in spots to the back of a rough 11x14 print. I did this with the handle of an old metal table knife, heated over a gas burner. I took care to leave the corners of the tissue free, for reasons which will appear;
4. Trimmed print and tissue together, using the carpenter's square and the sharp knife;
5. Placed the unit of print and tissue exactly where it was to go on the mount and laid a book on top of it;
6. Heated the knife handle again and reached it in under the print corners but on top of the corners of the tissue (this is why they were left free) and stuck the tissue to the mount at all four corners, and removed the book;
7. Laid mount and print face up, with a piece of tissue paper over the print, on top of ten or a dozen sheets of newspaper that had been laid on another board. The purpose of the newspaper was to lend a little resilience;
8. Then I was at the crisis of the evening. I took the plate of aluminum and set it over a low burning gas flame, shifting it around somewhat to help it to heat evenly. I allowed it to heat somewhat past the "siss" point and then laid it out on dry board to cool a little. As the plate cooled, the heat diffused throughout the metal, and by testing with drops of water I saw that the heat was evenly distributed and *slightly below* the "siss" point in just a couple of minutes. I then laid the plate on the print, popped the whole job, including the board, into a letter press, screwed the press down lightly—and went away.

Now in this piece I was going to say at this point, "Ho, boy, she stuck!" but I think I hardly need to say it. No one can doubt that she stuck. That was two and a half years ago and she is still stuck. I have never had a failure with this system.

A pretty good job of mounting is like a pretty good egg. With the scheme here described the mounted job comes out of the press practically cold in about two minutes with print and mount perfectly flat and smooth, with no pressure or heat marks, with no humps or ridges in the print indicating uneven sticking. It stays smooth and flat and stays stuck; clean, permanent, perfect.

The plate of aluminum I have serves to mount any print up to 11x14. Larger prints than that will require a correspondingly larger plate; I do not recommend more than one dwell in any case.

Regarding pressure, it isn't really necessary to use a press. The



Successor to the "Sad" Iron. Note beveled edges.

chief advantage of the press is that its iron robs the aluminum quickly of heat, but what's the hurry? My press is only 15 inches wide so when I use a 16x20 mount, instead of the press, I simply lay the job on the floor and stand on it. Of course, I insulate the plate in that case with a folded cloth or similar covering, though I like hot dogs—in their place.

Attention should be given to the mention of the use of a sheet of paper between the aluminum plate and the face of the print. Such a piece of paper should be used on all except glossy prints. It will protect the print from any chance bit of dirt that may be on the plate and, in particular, it will prevent the plate making slick or shiny spots on a matt print through transmission of the shine from the plate. If the plate is not to be used for glossies without the intervening sheet of paper it is advantageous to rub its shine off with abrasive.

Glossy prints are a different story and mounting them successfully is an art. Two things are important. One is that the mounting stock must be smooth. If it is an "art" stock, or is matt, there is great likelihood that the roughness will show through the print and destroy its slick. The other is that, instead of paper between the plate and the print, either thin metal must be used, or nothing, and if nothing is used, the surface of the hot plate must be smooth and highly polished. If thin metal is used its surface must be smooth and polished. Zinc is largely used for this purpose commercially but thin sheet aluminum is as good or better. Both heat and pressure should be kept at the minimum. Outside of these rules success with glossies is a matter of careful experiment and well worth the trouble.

Photography Goes Metric

Thomas Welles

ALWAYS extremely difficult to use, requiring as it does bizarre mathematical gymnastics, the *avoirdupois* so-called "system" of weights is rapidly giving way in photography to the much saner and infinitely simpler metric system, in which the unit of weight is the gram. The gram, incidentally, bears a definite relationship to the metric units of liquid measure and of linear measure, being equivalent to the mass of one cubic centimeter of water at 4° centigrade, at which temperature water attains its greatest density.

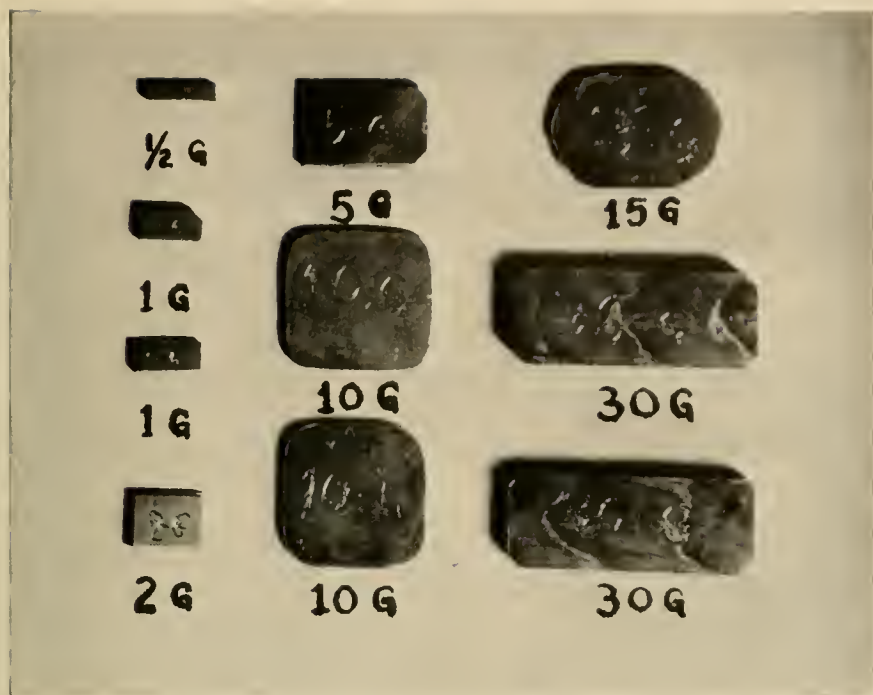
While most ordinary photographic formulae are still published in both the *avoirdupois* and metric systems, only metric weights and measures are given for many of the formulae devised for the newer color processes.

Now, here's the difficulty: most of us who have been in the "game" for any length of time are "stuck" with balances which are calibrated only in *avoirdupois*, and, while it is possible, with the aid of conversion tables and a goodly supply of lead pencils and patience, to convert metric formulae to *avoirdupois*, we will, when we have finished, not only have gone to considerable unnecessary trouble, but will have taken on the added burden of forcing ourselves to compound our formulae by an antiquated and involved method.

Fortunately, however, it is necessary neither to discard our precise little *avoirdupois* balances nor to consult a mathematician each time we wish to compound one of the newer formulae. With just a little time and effort and at practically no cost it is possible to make a set of gram weights for use on our present balance. With these we can henceforth work directly in the metric system.

My own set consists of ten weights, ranging from $\frac{1}{2}$ gram (or, to express it correctly, since the metric system is concerned with decimels rather than with fractions, .5 gram) to 30 grams. The photograph gives an idea of their comparative sizes.

With this set any amount of half-gram "steps" to more than 100 grams (a little more than three ounces) may be weighed simply by using various combinations of the weights. Moreover, it is a simple matter to weigh with sufficient accuracy for all practical purposes amounts less than .5 gram by using the sliding weight on the balance which, of course, is



The Set of Weights

calibrated in grains, since each one-tenth (.1) gram is equal to one and a half (1.5) grains.

Thus, by allowing 1.5 grains for each .1 gram, amounts as small as will ever appear in any formula may be weighed. Actually one gram weighs 15.4324 grains, so it will be seen that the error will not be sufficiently great to be even discoverable.

In making the weights almost any soft metal may be used. I used heavy sheet zinc for the weights up to and including 10 grams and type-metal (which contains a large percentage of lead) for the weights over 10 grams. Hard metals should be avoided, as they not only are difficult to work but it is impossible to later scratch identifications on anything much harder than zinc or brass.

There are two methods of making the weights, either of which will be found satisfactory.

The first, and perhaps the simpler, though more open than the other to the possibility of error, is to use water for the "master weight". A small, light container, such as a thin wine glass or aluminum cup, is placed in one of the trays on the balance and shot or sand poured into the other tray until the container is in perfect balance with it.

We have seen that a gram equals the weight of one cubic centimeter (1 cc) of water at 4° centigrade. In practice exact temperatures of the

water may be ignored, as the relation between volume and mass in water does not change appreciably through a moderate temperature range.

From a 100cc graduate pour 1cc of cold distilled water into the cup or glass. This is no easy feat, for if the weights are to be accurate the amount of water poured must be exact.

Now, estimating the necessary size as nearly as possible, cut a piece of sheet metal and place it in the tray with the shot. If you have guessed fairly close this tray will now dip, being slightly heavier than the one containing the water. Now file away a little at a time from the metal weight until the two trays are again in perfect balance. You will then have a 1-gram weight, and it may be identified by scratching the figure on it with the point of a knife.

Other weights are made in the same manner, allowing 1cc of water for each gram.

The second method for making the weights is to use the sliding grain weight as a master weight. Set this to a point half way between 15 and 16 grains (theoretically, at 15.4324 grains), cut a bit of metal, and, using a file to reduce its weight a little at a time, "work" it until, when it is placed in the tray ordinarily used for the chemicals being weighed, it brings the scale into exact balance.

A .5-gram weight may be made similarly by setting the sliding grain weight at about $7\frac{3}{4}$ grains, and a 2-gram weight by sliding the grain weight to a point just a shade under 31 grains and proceeding as above.

Now, if two 1-gram weights and one 2-gram weight have been made, a 5-gram weight may be fashioned by placing the three weights already finished in the weight tray of the balance, setting the grain scale again to 15.4 (approximately) grains (which will put a total of 5 grams on the "weight" side) and again cutting and filing a piece of metal as before, until it balances.

This 5-gram weight may now be added to the other weights, increasing their total to 10 grams, and a 10-gram weight made. I have found two weights of this size useful.

A 15-gram weight can easily be made by using one of the 10's you have just finished, together with the 5-gram weight, as the "master weight".

Two 30-gram weights complete the set. These can be most easily made by placing a regular 1-ounce weight together with a 1-gram weight (which you have just made) into the weight side of the balance and setting the sliding grain scale to about 2 grains. When a piece of metal is so worked that it brings this combination into perfect balance it will weigh 30 grams.

Another advantage to using a 1-ounce weight as the major part of the 30-gram balance combination, aside from its handiness, is that this weight, being of known accuracy, gives you a new check on the correctness of your smaller gram weights. In other words, if each of the 30-gram weights balances with various combinations of the smaller weights weighing 30 grams, you may be certain your weights are sufficiently accurate for any purpose to which you will be likely to put them.

When you start actual work you'll find all this isn't nearly as complicated as it looks on paper. Indeed, the entire job won't take you much more time than you have to take to convert a single metric system formula to avoidupois!

Cinema Section

Edited by

William A. Palmer

The Laws Of Light

LIGHT, the one most important factor in the taking and projecting of motion pictures, is usually pretty much of a mystery to the amateur movie maker. He takes his pictures, arranges his indoor lighting, and projects the finished product by rules and instructions without a conscious use of certain fundamental laws by which light is controlled. Most of the time this works out very well and one can make movies to his heart's content without being aware that light has laws. Just the same there are many times, especially when filming with interior lights, that a knowledge of some of the fundamentals of illumination can be of great help. Many times a little reasoning with these fundamentals in mind will tell one how to set his lights for the effect desired.

It is not necessary that the movie maker have a speaking acquaintance with such terms as lumens, candle power, and foot-candles nor does he need to carry a slide rule and work out problems mathematically. If he only knows in general how light acts he will not only know better how to get results with his light-dependent apparatus, but will get more pleasure out of being able to figure things out for himself. For this reason we are giving a few features of the laws of light as applied to motion pictures, leaving out the confusing terms and problems of the physics books.

What Is Light?

Light is generally considered to be a form of wave motion issuing from incandescent bodies, our two most common sources being the sun and mazda lamps. (Physicists aren't entirely sold on the details of the simple wave theory but we won't worry about that.) This wave motion is similar to that of sound and radio, but has a different wave length, that is, the waves are very much shorter. However, it is very convenient to think of light as a series of rays which travel in straight lines until interrupted or reflected. Bundles of rays travelling together are ordinarily referred to as beams. For all our conceptions of the behavior of light as applied to movies, the beams and rays will serve admirably.

A source of light such as a photoflood, when not in a reflector, radiates light in all directions as in figure 1. The light can be considered as an infinite number of rays shooting out at all angles. If a card six inches square is placed

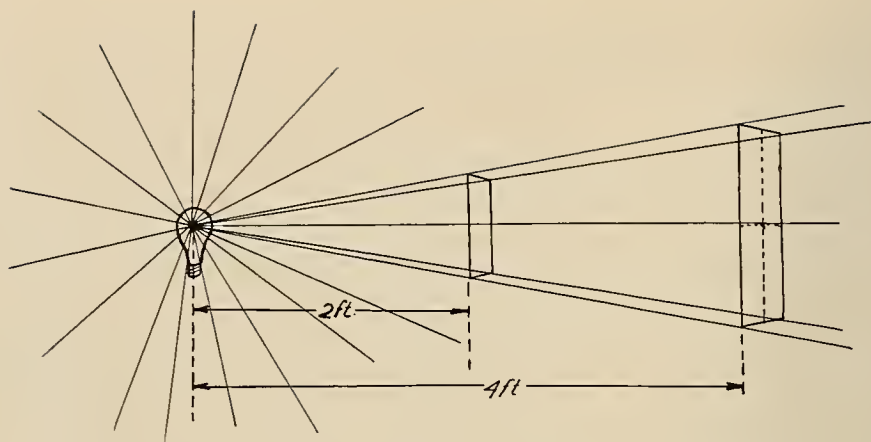


Fig. 1

two feet from the light, it will intercept a pyramid of rays and be illuminated to a definite brilliance. If this same pyramid of rays is continued on to a point four feet from the light, the same amount of light is now spread over *four* times the area. (Another look at figure 1 and a recollection of the geometry of similar triangles will prove this.) Naturally when the same amount of light is spread over four times the area, the brilliance will be one-quarter. Thus is shown the first and most useful of the laws of light: *The intensity of light varies inversely as the square of the distance from the light source.* In other words, an object twice as far away from a light will be illuminated to only one-quarter the intensity. In photography this means that a subject *twice* as far from a light will need *four* times the exposure.

Controlling Light

As we said, the rays of light travel in straight lines until they meet with some object which interrupts them and either absorbs or re-directs the light. Practically all the light used in either taking or projecting movies is controlled in some way, the bare unmodified light from an artificial source being always used with a reflector of some kind. Sunlight too is almost always modified by reflection from buildings, the ground, and particularly the sky.

There are three ways in which light is controlled: by *Absorption*, *Reflection*, and *Refraction*. All objects absorb a certain percentage of the light that may fall on them and this absorption varies with the color and texture. Black naturally absorbs the most and a rough surface also makes for greater absorption. In general except for the inside of cameras and lens tubes where stray light must be "killed", absorption is not of very great use, since it usually represents waste light.

Reflection is the most useful method of controlling light and the laws of reflection should be firmly in the mind. There are two types of reflection, regular (also known as specular) and diffuse. Regular reflection is that which we get from a smooth polished surface like a mirror. Such surfaces merely re-direct the

TYPES OF REFLECTIONS

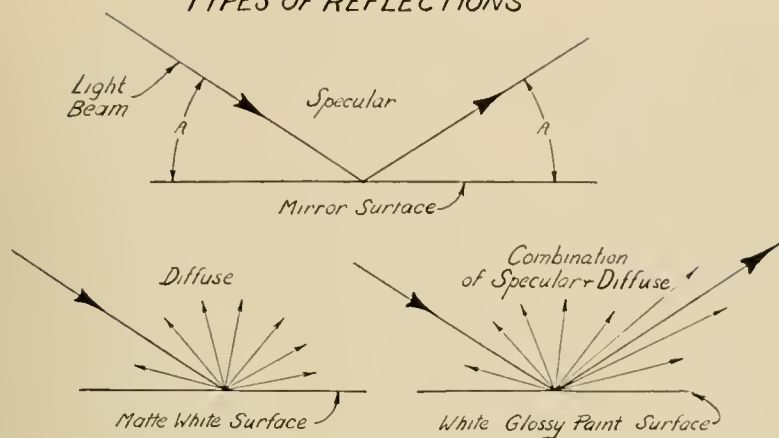


Fig. 2

rays of light and do not alter the general form of the light beam. In figure 2 is diagrammed a light ray hitting a flat mirror surface where it obeys a law which says that the angle of the light reflected from the surface is the same as the angle that the ray of light had when it struck the surface. These angles are shown in the illustration by the angles "A" in the upper diagram. This little principle can be used repeatedly when setting up lights for interiors, since often there are windows or glass doors in the scene and it is quite easy to pick up the image of one of the lamps reflected in the glass. When this occurs it is no trick to move the offending lamp where it will do no harm if one thinks about the equal angle law. Otherwise it is a trial and error proposition.

When light strikes a surface which has no gloss at all, it is reflected in all angles from that surface, the character of the light beam is changed and the light is said to be diffused. The lower left hand diagram of figure 2 represents the way light is scattered after hitting a matte white surface like a piece of blotting paper. The light which forms the image on our films is very largely diffused, since most objects have non-glossy surfaces and the light that they reflect is scattered. The most pleasing results in lighting a scene occur when the light falling on the subject is diffused in character itself. It is then still further diffused when reflected toward the camera to form the image on the film.

Objects which have some gloss but are not polished like a mirror, reflect light in a combination of specular and diffuse illumination. That is, there is a certain amount of the light reflected along a line according to the equal angle law and at the same time a good deal of light is scattered at all angles. This is the sort of reflection we get from aluminum reflectors and glossy painted surfaces. Practically all paper and ink used on title cards have a slightly glossy surface and so when the title cards are illuminated, the lamps must be placed so that the specular beam (which is reflected away from the surface at the same angle it strikes) is not directed toward the camera lens. The light we must use for good contrast in titles is the diffused type. By studying the third of the

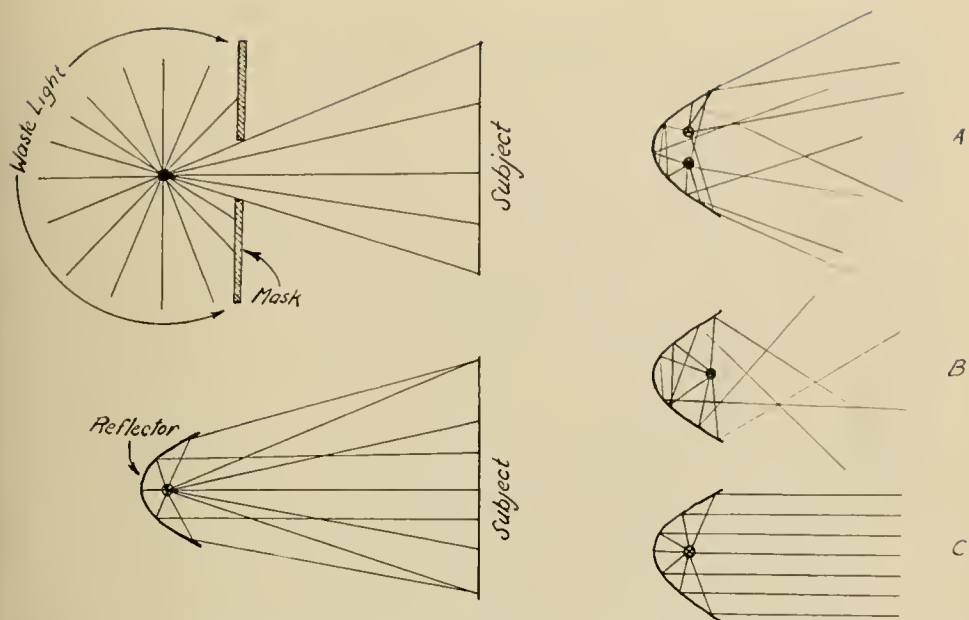
diagrams in figure 2 at the lower right, you can see that if the surface were a title card the camera could be pointed at right angles to the card and escape the specular beam which shoots out to the right. The smaller arrows, representing the diffused or scattered light rays would be used to make the exposure. (This is a more complete explanation of the advice given last month for successful titles on positive film.)

We put reflection to excellent use in both exterior and interior lighting, to control light and place it where we want it. Outdoors in sunlight, aluminum painted boards will kick back light of the combined specular and diffused variety and illuminate harsh shadows to give more pleasing scenes. In interior lighting, the principles of reflection are embodied in the lighting units for photoflood bulbs. These units usually have a bowl shaped reflector designed to throw the light all in the general direction of the subject. An idea of the increased efficiency of the units can be gained by reference to figure 3. At the top of this illustration is represented a bare photoflood lamp with no reflector of any kind. As we know the light from this lamp radiates in all directions so only a few rays emanating in the direction of the subject can be utilized. All the rest of the rays are lost and the effect is just the same as if we were to mask off all the rays as shown in the drawing. It is obviously a very poor lighting arrangement. By making use of the proper shaped reflector, however, usually one made of bright frosted aluminum, the lost light can be caught and turned back to fall on the subject. The reflector shape is designed to catch the light from a photoflood bulb and throw it out in approximately parallel rays since the light is placed in the focus of the bowl.

The majority of reflectors in use are those which were designed for the No. 1 Photoflood bulb. Lately, however, a large No. 2 bulb was placed on the market which gives about twice the total light output. Now, what happens when these larger bulbs are placed in the old reflectors? The first guess would be that since the larger lamps give twice the light output they will illuminate the subject to twice the brilliance when placed in the reflectors. But the new lamps have larger dimensions and the filament of the bulb is moved out of the focus of the reflector. The angle of the light beams hitting the reflector are changed and the light is scattered so that the subject often does not receive as much light as it would with the smaller No. 1 bulbs. This is shown graphically in figure 4B.

In figure 4A is diagrammed another stunt that amateurs often do in an attempt to get more light. A reflector designed for one photoflood lamp is fitted with a double socket and two lamps screwed in. Again the angles of the light beams are changed and the light is scattered. In figure 4C is shown the correct arrangement—one photoflood bulb of the proper size in a reflector which has been made for it. If you want to double the light on the scene, get twice as many units or replace a smaller unit and its bulb with a larger unit and a larger bulb. (Some lighting unit manufacturers are supplying extensions to use the No. 2 lamps in their reflectors, other manufacturers put out larger reflector units for the newer lamps.)

Another very important method of controlling light is by refraction. Refraction refers to the bending of light rays when they pass through lenses and other transparent media. The laws of refraction are a great deal more complicated than those of reflection and fortunately we don't have to know about them since their functions are considered and used by the builders of our



At left Fig. 3. At right Fig. 4. Fig. 4A, 2 photofloods in reflector designed for one bulb—light is scattered. Fig. 4B, No. 2 bulb placed in reflector designed for No. 1 bulb—light is scattered. Fig. 4C, one photoflood in correct reflector—light is thrown straight ahead to be placed where needed.

cameras and projectors. It is only through careful observance of refraction laws for instance that the present highly efficient projectors are possible. The mechanics and optical requirements of a projector are such that on the average only about 2% of the total light output of the projection lamp reaches the screen! Yet the present super projectors will throw excellent twelve foot pictures.

In projection it is well to remember the first law of light, that the intensity varies inversely as the square of the distance. Using the same projection lens, if we move the projector twice as far from the screen, we get a picture twice as big but only *one-quarter* as bright. However, if we change the lens of the projector so that our picture remains the same size with the projector at twice the original distance, the inverse square law does not hold. In the latter case the difference of brilliance in the two pictures of the same size, but projected from different distances, is dependent upon the relative efficiency of the two lenses. Usually longer focal length projection lenses are not quite so efficient as the regular ones, but the relative brilliance of the two pictures will be fairly close.



"Sunflower Pattern"

Mrs. Christine B. Fletcher

Advanced Medal Print

■ We have spoken before of Mrs. Fletcher's talents for fine still life arrangement; of the pleasing definition which she obtains, that is not quite wire-sharp but still gives fine rendering of textures; and of the restraint and dignity of her lighting schemes, so there is little reason for elaborating on those points now. A further factor that is always just right in her pictures is the relation of background to subject matter. Observe that she has carefully selected a tone which is definitely darker than any important highlight, and at the same time lighter than the principal dark tones of the subject. Such treatment reduces the function of the background to a minimum and results in a composition-in-tone that is quiet and soothing rather than harsh and emphatic. It is necessary that the photographer understand that such tonal relationships are of first importance in setting the emotional key of the picture. It is obvious that the serene beauty of this picture would be completely destroyed were the subject presented in sharp contrast with either a very dark or a very light background. A most helpful chapter on the subject of composition-in-tone may be found in the book *Composition For Photographer*, by R. N. Haile.

Data: 5 x 7" Century View; Centar Rapid Rectilinear lens; Defender X. F. Pan., in Defender M. Q. Borax, by daylight; print on Agfa Brovira Ivory, in M. Q. Print size 8 x 10".

Second Award
Advanced Class

■ This is a successful pictorial portrait because it gives us a concrete and natural impression of the outdoor man. It is free from any hint of artificiality, the sky provides a simple and appropriate background and the fishing flies in the hat give an effective hint of the man's purpose. There is one defect in the pose, which William Mortensen in his book on posing has designated as the "split profile". Observe that the tip of the nose and the outline of the cheek coincide. This is bad because of its ambiguity. The outlines of nose and cheek are confused with each other and as a consequence the observer is tempted to examine this part of the picture in detail

in order to clarify matters. Such minute examination of an unimportant detail cannot fail to work against the effectiveness of the picture as a whole. A similar weakness occurs when the eye furthest from the camera is cut by the outline of the head. Both such situations bring about a condition in which the structural details of a head are not clearly shown, and they are consequently to be avoided. The head should be turned so that the eye and the outline of the cheek are clearly shown, or else turned in the other direction so that the nose definitely extends beyond the outline of the cheek. In this case the first solution would appear best since it would diminish the size of the pipe by foreshortening.

Data: Leica Model F; 90 mm. F:4 lens, 1/60th sec. at F:9 on new type Agfa Superpan. in Champlin No. 7; Leitz No. 1 filter with small aluminum reflector, about 10:30 A. M. in August; Agfa Brovira Velvet medium, in Agfa B-5. Print size 11 x 14".



"Rugged Individual"

John B. Titcomb
Binghamton, N. Y.



"Needlework"

H. K. Shigeta
Chicago, Ill.

Third Award
Advanced Class

■ This picture has considerable story telling power. The expressive elements of the pose have been carefully worked out down to the smallest detail. Observe, for example, the humorous twist given to the picture by the pursed lips and the glasses far down on the nose. Notice that in each case the device has been used with restraint. The glasses are not placed on the extreme tip of the nose, and the pursing of the lips is done with subtlety so that it does not become a weird and exaggerated grimace. The failure of the great majority of story telling portraits is directly traceable to a lack of restraint in using the expressive elements so it is important for photographers to give serious attention to this matter. Our one disappointment in the picture concerns the harsh, overly brilliant quality of the print. Mr. Shigeta is a professional illustrative photographer and we therefore imagine that this print was originally made for purposes of reproduction.

(Continued on Page 194)

*"Children of the Mills"*

N. Wright Crowder
Baltimore, Md.

mean that we should consider all other forms of photography out-moded and useless. Mr. Crowder's picture is an emphatic comment on the bad environment in which the more unfortunate children of our industrial towns are forced to live. The possibility of improving the living conditions of such children must depend to a great extent upon the educating of the great mass of Americans to an appreciation of the sordidness of that environment; of the toll it exacts in misery and ill health; of the criminal tendencies it cannot fail to engender. Photography such as this can play a great and important part in that educating process.

Data: $3\frac{1}{4} \times 4\frac{1}{4}$ " Auto Graflex; Verito lens; 1/25th sec. on E. K. S. S. Pan., in D-72 hazy day in November; E. K. P. M. C. #9 normal in D-72 Print size 11 x 14".

Fifth Award

Advanced Class

■ Let us admit at the outset that Mr. Wright is dealing with very fascinating subject matter and that the discovery of such subject matter is of major importance to the success of any picture. The picture would surely have placed higher had it not been for the rather distracting effect of some of the material surrounding the figure. This situation can readily be corrected we think by trimming the print from the base up to the point where the uppermost horizontal line of the base of the easel cuts the left edge of the print. Such trimming eliminates nothing that is essential to the picture. We would then completely kill the highlight on the edge of the easel base which now runs entirely across the print, and would diminish the brightness of the tone on the sunlit portion of the nearest leg of the easel. It might also help a little if the sunlit portion of the background to the right of the easel were slightly lowered in tone, though with the other suggestions carried out this might be found unnecessary.

Data: 4 x 5" Graflex; Tessar lens; 1/50 sec. at F:8, on Defender X. F. Pan. Print size 8 x 13".

*"Concentration"*

G. P. Wright
Chicago, Ill.



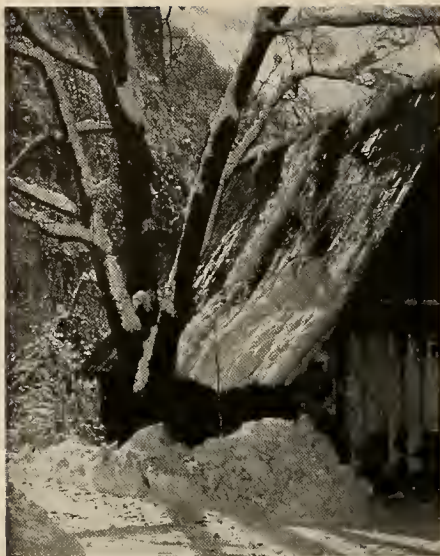
"Twine"

*B. Russell Whitaker, Jr.
Mineola, N. Y.*

Amateur Medal Print

■ This is one of those pictures which seem to win their way to a jury's heart (if such a thing there be) by the sheer beauty of good photography. There is this about good technique, it will insure your print a most favorable first impression. That favorable first impression will not last if the picture is lacking in other qualities, but at least you can be fairly sure that your picture will receive a definitely sympathetic inspection if it is technically good. On the other hand a picture which is poor technically but otherwise good must overcome an initial disadvantage, for such a picture fails to put its "best foot forward", as the saying goes. As an arrangement this picture is not outstanding. Its principal weakness seems to be the lack of any very definite center of interest. Perhaps the easiest way in which this could be provided would be to tie a loose knot in the rope at some appropriate point.

Data: 4 x 5" Korona View; 7" Wollensak Velostigmat Series II 75 secs. at F:45, on E. K. Par Speed film in DK-50; by one 500 W. lamp in reflector; Defender Velour Black DL in D-72. 11 x 14" prints on 16 x 20" mounts may be obtained at the price of \$5.00 upon application to Camera Craft.

*"There's Magic in the Sun"*

*Fred Herrington
San Francisco, Calif.*

■ The contrasted textures of snow and shingles that are so beautifully revealed by the low angle of light, provided fascinating subject matter for this fine picture. By careful trimming or choice of camera angle, Mr. Herrington has established a splendid relationship between tree and building. The two supplement each other beautifully. The extremely interesting and varied textures on the roof of the building definitely take first place while the tree gracefully accepts a subordinate role. The tonal graduations in the most important part of the picture, the roof of the building, are just about perfect, but there is perhaps a shade too much contrast in the print as a whole. This is revealed by a lack of shadow detail in the limbs of the tree, and by too light a tone in the clouded sky. This last could stand slight dodging in.

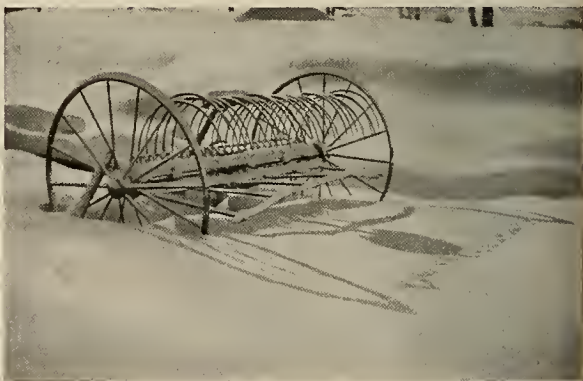
Data: $3\frac{1}{4} \times 4\frac{1}{4}$ " Graflex $6\frac{1}{2}$ " Zeiss Tessar; 1/20 sec. at F:16, on E. K. Panchro-Press cut film, in DK-76 with 100 grs. of

potassium bromide per gal.; Aero #2 filter; late afternoon in December; print on E. K. News Bromide, in D-72. 8 x 10" prints on 14 x 18" mounts may be obtained at the price of \$5.00 upon application to Camera Craft.

Third Award

Amateur Class

■ The delicate tracery of the cast shadows on the snow and the interesting details of the snow covered piece of farm machinery afford splendid material for this picture. With such a low angle of light, a better rendition of snow textures should have been obtained. So far as it is possible to determine the cause from the print, it appears to be due to a all-over lack of sharpness probably caused by slight camera movement. Mr. Beise is correct in feeling that something in the nature of the tree trunks at the upper edge of the print is required to complete the picture. If these are trimmed away the extremely light tone of the snow just below them give the print the appearance of fading away to nothing. We would however touch out the three smallest points to the left, for those on the right are sufficient for the purpose. This could be accomplished on the print with a local reducer such as Etchadine.

*"Neglected"*

*Charles J. Beise
Durango, Colo*

Data: E. K. 620 Jr.; 1/25th sec. at F:8, on E. K. Verichrome; light yellow filter print on Agfa Brovira. 7 x 10" prints on 14 x 18" mounts may be obtained at the price of \$5.00 upon application to Camera Craft. Prints will be exchanged with other prize winners in these competitions only.

**Fourth Award
Amateur Class**

■ Mr. Newman was no doubt intrigued by the geometrical pattern formed by the intersecting tracks and he has done a good photographic job of recording them. The cast shadows add some variation that is distinctly desirable. It is extremely difficult to successfully organize a scene of this nature into a successful composition. We are bothered by the lack of a really dominate center of interest, and by the fact that there are so many strong directional lines running counter to each other. The most obvious and simple solution of such a problem is to place an isolated figure in a strong position and in strong relief. In the present case, for example, a jaywalker placed in the sunlit portion or the area where the tracks intersect at right angles would dominate the scene because of isolation and because of the psychological effect of his action being contrary to traffic rules. This picture needs some such clarifying element.

Data: 1 $\frac{3}{8}$ x 2 $\frac{1}{2}$ " Exakta; 7.5 cm. Zeiss Tessar; 1/50th sec., at F: 5.6 on E. K. Panatomic in Eastman Ultra Fine Grain; 5 P. M. in April; print on Illustrators Special, in M. Q. 11 x 14" prints on 16 x 20" mounts may be obtained at the price of \$5.00 upon application to **Camera Craft**.



"Shadows at the Crosslines"

*Leo R. Newman
Chicago, Ill.*



"Light and Lines"

*M. H. Deshler
Phoenix, Ariz.*

but against a too common practice that shows signs of becoming an epidemic. It is this. We think that there is no possible justification for the practice of casting arbitrary shadow lines across a nude figure. A major objective in good photographs of the nude is to reveal a harmonious relation of volumes. What chance is there to attain that objective with a bunch of entirely irrelevant lines slashing the whole arrangement into bits? Does the introduction of such lines serve any clearly realized purpose? Have such lines any real relation to the structure of the body? Obviously not, so why spoil a good picture by using them?

Data: 5 x 7" Eastman View; Defender X. F. Pan., in D-76; print on E. K. Opal W, in Amidol; gold toned. Print size 10 x 12".

**Fifth Award
Amateur Class**

■ There are several praiseworthy things about this picture. Mr. Deshler has discovered a very lovely model, he shows himself a competent photographic technician, and the pose is basically sound though it suffers from a few weaknesses of detail, such as the too straight line of the back. We wish to apologize to Mr. Deshler for using this space to get something off our chests that has been bothering for many a day. Our remarks are not directed primarily against this print which is better than many we have seen in places of honor,

Monthly Competition

Scoring for Club Trophy Cups

The following won points for their clubs in the Advanced Class: N. Wright Crowder, for the Baltimore Camera Club; H. K. Shigeta and G. P. Wright, for the Fort Dearborn Camera Club; and Mrs. Christine B. Fletcher, for the Photographic Society of San Francisco.

The following won points for their clubs in the Amateur Class: Fred Herrington, for the E.P.I.C. Group, and B. Russell Whitaker, Jr., for the Nassau County Camera Club.

The following prize winners have no club affiliations: John B. Titcomb, Charles J. Beise, Leo R. Newman, and M. H. Deshler.

Contributing Clubs

Avon Old Farms School Photographic Club (Avon, Conn.)	Nassau County Camera Club (Mineola, N. Y.)
Baltimore Camera Club (Md.)	Norfolk Photographic Club (Va.)
Boulder Lens Club (Colo.)	Nutmeg Camera Club (Manchester, Conn.)
Calgary Photographic Society (Canada)	Oklahoma Camera Club (Okla.)
The Camera Clique (St. Louis, Mo.)	Orleans Camera Club (New Orleans, La.)
Camera Club of Long Beach (Calif.)	Palo Alto Camera Club (Calif.)
Camera Club of Ottawa (Canada)	Panama Pictorialists (Panama City, C.Z.)
East Bay Camera Club (Oakland, Calif.)	Photographic Society of San Francisco
E. P. I. C. Group of San Francisco	Pictorial Photographers of America
Fort Dearborn Camera Club	Toledo Camera Club (Ohio)
Fresno Camera Club (Calif.)	Worcester Photo Clan (Mass.)
Miniature Camera Club of Oakland (Calif.)	Yakima Camera Club (Wash.)

STANDING OF THE CLUBS

Large Clubs Advanced Class		Large Clubs Amateur Class	
Fort Dearborn Camera Club.....	12	Golden Gate Miniature Camera Club....	4
Photographic Society of San Francisco	11	Photographic Society of San Francisco	3
Small Clubs Advanced Class		Small Clubs Amateur Class	
Fotoklub Ljubljana.....	6	E. P. I. C. Group.....	9
Los Angeles Camera Club.....	6	Oklahoma Camera Club.....	7
Miniature Camera Club of New York..	2	Nassau County Camera Club.....	5
Small Clubs Advanced Class		Riverside Camera Club.....	4
The Camera Clique.....	10	Washington Pictorialists.....	4
Baltimore Camera Club.....	6	Crockett Photographic Society.....	2
East Bay Camera Club.....	1	Norfolk Photographic Club.....	1
		San Jose Camera Club.....	1

(Continued from Page 189)

As such it is quite satisfactory. For artistic purposes however, the brightness of the shirt front, and the highlight which shows through the loop of material on which the man is working is too great, and the highlight side of the face seems a bit too harsh and brilliant. These are matters which could easily be corrected in printing.

Data: 8 x 10" Studio Camera; 24" Dagor lens; 1/2 sec. at F:12.5, on Defender X. F. Pan.; print on Agfa Brovira glossy. Print size 11 x 14".

Club Notes

The San Francisco International Invitational Salon of Photography

It is a pleasure to report in these pages the culmination of more than two years of planning and cooperation between the San Francisco Art Association and the Photographic Society of San Francisco. It is the aim of these two organizations to produce for San Francisco a Salon of exceptionally high standards, and one which would be conducted on a unique basis that would give it individual standing and recognition throughout the world. To the writer it appears that they have made great strides in achieving their objective. The plan of the exhibition is as follows: After much correspondence the Salon has established in each of the principal foreign countries, a representative of the Salon, in each case a man or men of recognized standing among photographers. The list of those to be invited to contribute was compiled with the advice and assistance of representatives, each one confining himself to selecting the outstanding photographers in his particular country. An especial effort was made to reach those of known capabilities who do not usually exhibit in the open shows. The representative in each country collects the photographs and forwards them in a group to San Francisco. This, plus the elimination of the entry fee makes everything as convenient as possible for the exhibitor. The groups of prints from each country will be hung as national units and so labeled so that the exhibition will provide an excellent opportunity for comparing the trends and development of photography in various countries.

In all something over 400 invitations have been sent out, 75 in the United States, and from 10 to 50 to other countries, the number depending upon population and photographic activity. Obviously it remains to be seen whether or not this plan of procedure will produce an outstanding show. Advance indications are decidedly encouraging, but the exhibition itself must tell the final story. The Salon will be hung from May 16th

to June 13th at The San Francisco Art Museum, San Francisco, Calif.

New Quarters for Fort Dearborn Club

December at Fort Dearborn was a period of flux and readjustment. The new quarters were theoretically ready for occupancy on the first of the month, but last minute changes and a swarm of details kept the building committee hopping until well after the new year.

But in spite of paint in the hypo, and/or hypo in the paint, the affairs of the club continued without serious interruption. With a membership of 127, only 8 more members can be admitted before the roster is complete.

Officers for 1937 are Roy Dewey, President, V. E. Johnson, Vice President, Fred Lawrence, Treasurer, and Grace Kelley, Secretary.

Meetings are at 8:15 P. M. every Friday at 75 E. Wacker Drive. "Come up 'n see us sometime".

California Camera Club School

The California Camera Club will open the spring term of their School of Photography for beginners and intermediate workers on March 12th. The courses will cover the important technical and artistic aspects of pictorial photography. Classes are in charge of Mr. Loeber. Non-members are charged \$5.00 for the course which is free to members of the club.

New Club

A new trend in the organization of Camera Clubs is revealed by the formation of the new Welles Park Camera Club of Chicago for the principle purpose of instruction in modern amateur photographic technique and the dissemination of photographic knowledge.

This new club, which is open to anyone interested in learning more about photography, has already constructed a complete darkroom which will be used in connection with its weekly meetings. For further information, write the Secretary, Mr. Irving Jensen, 2608 Montrose Avenue, Chicago, Illinois.

Camera Club of the New York Times

The recently organized Camera Club of The New York Times, with club rooms on the Ninth and Eleventh Floors of 229 West 43rd Street, have made rapid strides in the promotion of better photography since its inception in October, 1936. Enrollment for the present has been limited to thirty, as only members of the New York Times Staff are eligible.

Meetings are held every Monday evening from 6 to 9 P. M., at which time informal talks are held to discuss photographic experiences and events of the past week and disseminate new information among the members.

The officers of the Club, who have been elected for a period of one year, are as follows:

John J. Donnelly.....	President and Treasurer
William Freese.....	Honorary Chairman
Katherine A. Quinn.....	Secretary
Grace W. Morgan.....	Art Director
John C. Rossbach.....	Technical Supervisor
Harold Royer.....	Publicity Director

An honorary membership has been bestowed on Mr. F. Allan Morgan, A.R.P.S.

The weekly meetings are divided into two periods, namely:

The first period contains lectures on the theory of photography and its uses. These lectures are held in the lecture hall on the Eleventh Floor. At present Grace W. Morgan of the F. Allan Morgan Studios is conducting a series of lectures on "Composition."

The second period is devoted to practical applications on photography under the direction of Mr. William Harris. These are held in the laboratories on the Ninth Floor, which are equipped with the finest modern accessories. Studio problems are demonstrated as well. Field trips are also included in the Club's schedule covering many interesting angles. Visits to many prominent studios in New York City have been made with additional ones scheduled.

Radio Used in Camera Club Membership Drive

As is the case with many clubs, the problem of finances coupled with desire of this group to obtain the class of speaker that a large membership affords, started

the St. Paul Camera Club on a membership drive.

Taking to the most modern of publicity forces, the radio, this ingenious group under the direction of Mr. C. A. Abbott, a member, began a series of weekly programs over St. Paul's new Station WMIN. Their fifteen minute program entitled, "The Story Behind the Picture", is a dramatization of the sequences leading up to the taking of a picture. In other words, what makes the old "sea salt" look as he did when the camera snapped him. A new picture is selected each week and the program which began March 9th will run for eight weeks.

This publicity has already doubled the membership and has also instilled a new spirit in the group that has necessitated two meetings a month instead of the usual one.

Unwilling to overlook any means of publicity the club are showing each month's prize winning prints in St. Paul's leading theatre, The Paramount. Newspapers are also cooperating.

Meetings are now held in Room 514, Pioneer Bldg., 4th and Robert, St. Paul.

Exhibition of Technical and Applied Photography

The Rochester Technical Section of the Photographic Society of America has arranged the First International Exhibit of Scientific and Applied photography. It will be on exhibition in Rochester from March 15th to April 3rd and after that will make an extended tour of the United States visiting all the major cities. Emphasis is on photography in which pictorial or artistic quality is not the prime consideration and which is intended to convey information rather than emotional gratification or amusement. More than 1500 pictures have been collected from all over the world and in addition to these a group of 300 prints assembled by the Royal Photographic Society of England will be included. The largest single section is that of medical photography but the exhibition includes sections on every branch of scientific and applied photography and the number of rare and unusual photographs is endless.

Weston Photographs in New York Exhibition

For the first time in five years, the work of Edward Weston will be on exhibition in New York City. The one-man show will be hung in the Karl Nierendorf Gallery, 20 West 53rd St., New York City. Mr. Nierendorf may be recalled as the publisher of the very successful "Urformen der Kunst" and has but recently opened his gallery.

Mr. Weston needs no introduction to photographers as his name and work have long been synonymous with excellence in photographic circles. This opportunity to study his pictures should not be overlooked by any camera enthusiast in the New York area. The Exhibition will open about April 1st.

U. S. Camera Salon in San Francisco

From April 3rd to April 18th, the U. S. Camera Salon will be on exhibition at the De Young Museum. The range and quality of these pictures has already been proven by the U. S. Camera Annual itself and thousands have already profited by the reproductions in this volume. Naturally, there is much interest in original photographs themselves and as they represent the work of the leading photographers, professional as well as amateur, one will be able to see a complete cross-section of photographic endeavor in the United States during the past year. This show may well be considered one of the outstanding photographic exhibitions of the year.

Ház Instruction Still Available

Last month we announced that Mr. Nicholas Ház would be giving courses in San Francisco. Many took advantage of this opportunity and others will be glad to learn that arrangements can still be made to study under this excellent instructor. Mr. Ház, after a few weeks in Los Angeles, where he gave his courses under the auspices of the Art Center School, is once more in San Francisco. He will remain here until April 16th, at least. The fee for the course is \$25.00 and the number of students in each class is limited to eight. All interested persons should communicate immediately with Mr. Roland Calder, Trainer & Parsons, 228

Post St., of San Francisco, or with the office of this magazine.

American Design Exhibition in Chicago

American arts and crafts from Colonial times to the dawn of the 20th century is the theme of the largest and most comprehensive exhibition ever held of the Index of American Design of the WPA Federal Art Project. This display, opening March 15 at Marshall Field and Company in Chicago, contains a selection of 750 Index plates, illustrative of every vital phase of American art through three centuries. Of particular photographic interest, are the excellent documentary photographs which are part of the exhibition.

Arthur Purdon to Speak at East Bay Camera Club

On Thursday, April 8th, Mr. Arthur Purdon will give a lecture on "Fine Grain Developing," at the Alden Branch Library, 52nd and Telegraph, Oakland, Calif., to the East Bay Camera Club, at 8:00 P. M. After the lecture there will be an exhibition of prints taken on the Club's last field trip.

Mr. C. S. Weitz will give a lecture entitled "Projection Printing and Enlarging" at the Alden Branch Library, on April 22nd, at 8:00 P. M. The monthly field trip of the Club will be held on Sunday, April 25th. Visitors are cordially invited to both the lectures and field trip, for further information regarding either, phone L. P. Warren, President, Glencourt 6226.

100 Print Salon in Chicago

The Associated Camera Clubs of the Chicago Area have received a salon of 100 prints from the Metropolitan Camera Club Council of New York. The prints are of a very high standard and quality, some of them having been exhibited in salons in many parts of the world.

The salon will be in the Chicago Area for two months, and will be exhibited in whole or in part at each member club of the association; as well as, during March, at Marshall Field & Co., State Street Store, and during April, at the Rosenwald Industrial Museum in Jackson Park. This will give those in the Chicago Area an excellent opportunity to see this fine show.

Association News

Associated Photographers Convention in Sacramento

The Associated Photographers of the Sacramento and San Joaquin Valleys will hold their annual Convention in Sacramento, Calif., on April 17th and 18th. All who remember the excellence of the last convention will be sure to attend and with the increased numbers a successful venture always brings a greatly increased attendance is anticipated. The program at last years meeting set a standard that would be difficult to surpass but we feel sure the new program will make its own high mark.

Following are the complete picture exhibit rules:—

Portrait and Commercial Exhibit

Prints will be accepted and hung from the following classifications.

Portraits:

- | | |
|--------------|--------------------|
| (1) Men | (5) Brides, groups |
| (2) Women | or singles |
| (3) Children | (6) Characters |
| (4) Babies | (7) Miniatures |
| | (8) Color |

Commercial:

- | | |
|-------------------|-------------|
| (1) Pictorial | (7) Aerial |
| (2) Architectural | (8) Color |
| (3) Illustrative | (9) News |
| (4) Animals | (10) Color |
| (5) Groups | Photography |
| (6) Candid Camera | |

No exhibitor may submit more than ten (10) commercial or eight (8) portraits, or both, a total of eighteen (18). No more than two from a classification unless all are in one.

All prints **MUST** be mounted; no mount larger than 16x20 except in group or circuit prints.

No studio name or other identification mark may be placed on the face of any print or mount.

The complete name and address of the studio must appear on the back of each mount, otherwise the Association cannot be responsible for the return of prints.

No prints will be accepted for competition which have on the face of the mount,

seals or other marks of award from other salons or exhibits.

Framed pictures with or without glass will not be accepted excepting miniatures.

The complete return address of the studio must appear on the inside of the wrapper so that the same wrapper may be turned and used for returning prints.

All exhibits will be returned express collect, this being the only way by which a receipt can be obtained for all packages and proper return assured.

The exhibit will be used as a traveling exhibit after the convention and return will not be made until after Sept. 1st.

Prints are to be judged according to classification, only three awards will be given each classification, namely, first, second and third. Ribbons will be used as awards.

All prints found worthy of hanging to be given a special seal of recognition.

All exhibits must reach Sacramento not later than April 5th in order they may be placed in their proper classification.

Address your exhibit as follows: Photographers Convention Chairman Print Committee, 1105 L Street, Sacramento, Calif.

All prints are sent absolutely at the owners risk, and while all necessary care will be taken, the Association will not be held responsible for damage, loss or theft.

For further information write:—Clarence W. L. Burkett, Secretary, 1018½ J Street, Sacramento, Calif.

Demand for Space at 1937 National Convention Indicates Landslide Attendance

The Photographers' Association of America has been so busy selling space for its 1937 convention, which will be held in Chicago, at the Stevens Hotel, August 23rd to 27th, inclusive, that we are not yet able to make any definite announcement about the program, though we are informed that it will be even more comprehensive than last year's, and will include many new speakers and demonstrators. Also of interest is the news that over \$1000 is to be spent on new easels for the tremendous picture exhibit.

Notes and Comments

DuPont Superior Panchromatic Film

DuPont Superior Panchromatic Film is one of the fastest on the market. It combines emulsion speed with remarkably fine grain for such a fast film and gives exceptional color rendition. These valuable film characteristics have made DuPont Superior Panchromatic Film very popular with Minicams to whom speed and fine grain are essentials.

Ask your dealer for this film, or write DuPont Film Manufacturing Corp., 35 West 45th St., New York City for complete details.

A Market For Your Photographs

Phil McCormick, Inc., 17 Edgewood Ave., Cranston, R. I., are offering a marketing service for your photographs. It is their intention to place the work of freelance photographers with the countries leading advertisers. They also offer free criticism and advice and distribute samples of work of the type that finds a market. For complete information on this service write Phil McCormick, Inc., at the above address.

New Champlin Service

Harry Champlin, whose sensational book "Champlin on Fine Grain" and remarkable new fine grain formulas have caused such a furor in minicam circles, now offers a developing service.

He will develop your 35mm. film, by inspection, in his new fine grain formula #15. Mr. Champlin's personal comment slip will be returned with each roll. Price 50 cents per roll, postpaid. Send your orders or requests for further details to: Harry Champlin, 9708 Santa Monica Blvd., Beverly Hills, Calif.

Camera Bargains

Mogull Bros., 1944-C Boston Road, New York, N. Y. have their new, free bargain list ready now. A few of the extraordinary "buys" listed include: a Leica Enlarger for \$35.00; an Exakta Camera, Model B with F3.5 lens \$62.50; and a Victor Turret Camera for \$45.00. Mogull Bros., also have an exceptionally complete film library and will supply a list free upon request to the above address.

"Zeiss Photography"

Carl Zeiss, Inc., is at present planning a most elaborate book to be published under the above title, and to contain a large number of the finest examples of photographs made with Zeiss Ikon cameras and Carl Zeiss lenses. All photographers who are working with such equipment are invited to send in examples of their best work for possible inclusion in the book. As yet no definite closing date for the consideration of prints has been set but it is advisable to send in your work without undue delay. The company informs us that they have taken great care to select the finest possible printing process and that no expense will be spared to make the book a superlative thing in every way. It will be primarily a picture book, but on the page facing each picture there will be a critical appreciation of that print as well as full technical information concerning it. There are no restrictions as to subject matter, and the maker of each print reproduced will receive a copy of the book.

Going to Mexico?

Mexico is fast becoming the photographic Mecca for unbelievable hosts of Americans who come back wildly enthusiastic about the marvelous picture opportunities which that interesting country affords. One of the first things which such a traveler wishes to know is the name and address of a reliable photographic dealer. We can give you one. Foto-Mantel-Sucr. Rudolph Rudiger, Calle Ven. Carranza No. 11, Mexico City, Mexico. P. O. Box 1459. The firm has also just opened its first branch store at Avenida Juarez 66, Mexico City, Mexico.

"Tabloid" Guide To Photography

If you would like to have a little booklet giving in simple language a most instructive discussion of Development, both fine grain and otherwise, Exposure, Printing, Intensification, Reduction, and some information on Toning, write to Burroughs Welcome & Co., 9 & 11 East 41st St., New York, N. Y., and ask for the booklet carrying the above title. It will be sent to you free of charge.



Eastman Announces New Low Priced 16mm. Cine-Kodak E.

From Rochester comes the announcement of the new 16mm. Model E. Cine-Kodak retailing for only \$48.50, the lowest priced 16mm. Cine-Kodak ever offered to home movie enthusiasts.

The price, however, is not the greatest news. Cine-Kodak E is a brilliant movie maker, new and distinctive in appearance and incorporates features and refinements found only in higher priced 16mm. Cine-Kodaks. In every respect it has all the quality generally credited to a Cine-Kodak.

One feature is the supply and "take-up" spools working in the same plane.

Ordinarily, this one-plane arrangement means that one reel is above the other, resulting in a vertical camera shape—and such a shape is difficult for hatted movie makers to use. One cannot sight it without the upper portion of the camera interfering with one's hat brim. In the "E," however, the upper reel is "staggered" forward. As a result, the "E" may be used without interfering with even the broadest hat brim.

The one-plane design also makes for easier film threading; this advantage has been increased by a new film gate which is simplicity itself.

The view finder, in the "E," is fully enclosed, giving an unusually brilliant image and aids concentration on the scene being shot, by eliminating distractions.

Within the view finder is a unique and very useful feature—a film footage indicator. As you shoot a scene you can keep

track of the amount of film you are using. No need to stop in order to check up on how much film is left. Of course, there is, as well, the usual film footage meter on the side of the camera. Both meters are fully automatic.

The "E" can be operated at any of three speeds—Normal, Intermediate and Slow Motion—16, 32 and 64 frames per second.

Winding handle for the sturdy spring motor is permanently attached. Fully wound, the motor runs for more than half a minute at normal speed. It is quiet and smooth in operation.

Cine-Kodak E loads with either 50 or 100-ft. rolls of 16mm. Cine-Kodak Film, black-and-white or Kodachrome.

Standard equipment for the new Cine-Kodak E is the Kodak Anastigmat 20mm. F3.5 lens, fixed focus—and with the increased speed of film, particularly Kodachrome, this lens is capable of rendering excellent results under a wide variety of light conditions.

The case of Cine-Kodak E is die-cast aluminum, finished outside in black. The carrying strap is placed so that the camera is nicely balanced.

Tripod socket fits standard tripods and Cine-Kodak Titler. A carrying case, priced at \$7.50, is to be available which will hold the camera, two 100-foot rolls of film, and filters.

New Numbered Film Holders Announced by Agfa Ansco

Professional photographers who have experienced trouble in negative identification will welcome the introduction of numbered film holders which Agfa Ansco Corporation of Binghamton, N. Y., has just announced. These holders insure absolute negative identification by a stencil or mask built into one corner of the holder. A number cut in the stencil is registered on a corner of the film when the exposure is made to leave a permanent record of that number on the film negative. Corresponding numbers are stamped on the outside of the holder. The new numbered holders, which are otherwise identical to regular Agfa film holders, are supplied in 5x7 and 8x10 sizes only, in sets of twelve double holders with number series of 1 to 24, 25 to 48, and 49 to 72.

Sunset Magazine Opens Photographic Contest

Beginning with the July issue, the **Sunset Magazine** will open a monthly photographic contest to Western Cameramen. First prize will be \$25.00 and there will be four to six prizes of \$5.00 each.

The subject matter of the contest is unique in that the pictures will be grouped around a "Topic-of-the-Month", showing interesting features of Western homes and gardens. Thus the photographs submitted, must not only be beautiful photographs but must also contain an idea that will be helpful and stimulating to Sunset readers in building and modernizing their homes and gardens. Topics for the next three months are as follows:—

For the July Issue: **ROCK GARDENS & GARDEN POOLS.** "Subjects for this topic should come from small homes where limited space has been ingeniously utilized." **Closing date: April 25th.**

For the August Issue: **GENTLY-MODERN.** "This topic is intended to cover views of corner windows—which are typical of modernistic homes but are also adaptable to other styles of architecture."

Closing date: May 25th.

For the September Issue: **FUN BY THE FIRE.** "This topic covers views of barbecues, and fireplaces indoor and out." **Closing date: June 25th.**

Contest Rules

(1) This contest open to all cameramen resident in Washington, Oregon, California, Arizona, Idaho, Nevada, Utah. (2) Photos should be mailed to the Editor of Sunset Magazine, 576 Sacramento St., San Francisco, Calif. (3) Photos should be sharp glossy prints, size to be not less than 4" x 6", not more than 11" x 14". (4) Pasted on each photo must be a sheet showing name and address of: (a) contestant, (b) owner of home photographed. (5) The Editors of Sunset will be the judges, and their decision will be final. In case of a tie, duplicate prizes will be awarded. (6) For winning photo each month, Sunset will pay \$25, and \$5 each for all other photographs accepted for publication, payment to be made on date of publication. (7) Photographs not accepted will be returned only when accompanied by a stamped, self-addressed envelope.

A New Super-Flash Photolamp

For the first time since photographers discarded photo flash powders years ago, a new type of photoflash lamp called Superflash has been developed and perfected to simplify picture taking at night, especially of action shots. The new type is reported to give 50% more total illumination than present day foil

types, is said to maintain the brightest part of its flash three times as long, and to maintain twice as long a duration of flash above 100,000 I.P.U. (International Photographic Units).

Unlike the foil lamp, the light producing medium of the new type resembles a fine wire fluff, but in reality is a carefully controlled hydrolanium wire of a precise length and diameter. The manufacturers state that the timing characteristics and intensity and volume of light are controlled by the precise measurements of this wire, so that it has been possible for the first time to lengthen the flash at its brightest point, thus assuring full coverage and evenly exposed negatives even when the lamp is flashed with professional synchronizers on "candid" cameras of the focal plane type, hitherto an impossible feat.

A further innovation is the blue Safety Spot which each Superflash carries as protection against misses, spoiled negatives and exploding bulbs. Explosions are caused by air seeping into the bulb, but if air enters the Superflash bulb, the Safety Spot turns pink thus warning the photographer to use only perfect blue spot bulbs.

Wabash Photolamp Corporation, 335 Carroll St., Brooklyn, N. Y.

Photographs Wanted

Photographs of people using the new style Bausch & Lomb Binoculars are wanted by Ed Wolff & Associates, 428 Taylor Bldg., Rochester, N. Y. Pictures may be purchased for advertising purposes or for publicity in magazines. Sharp, clear pictures showing Bausch & Lomb Binoculars in actual use are desired. State price. Photographs not used will be returned, if postage is enclosed.

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The General Cine Service, 204C East 18th St., New York City, are offering an all-around service to cinephotographers. Handling 8 and 16mm. films of all kinds, the General Service includes, Titling and Editing, Developing and Printing, and the making of Duplicate Prints. Write the General Cine Service, at the above address, for complete details and ask them about your production problems.

Our Book Shelves

The Model, A Book on the Problems of Posing, by William Mortensen. Published by the Camera Craft Publishing Co., of San Francisco. 272 pages, 6 x 8½", cloth bound, price \$3.00.

"Photographers have for a long time been gazing with hypnotic absorption at this mechanical-optical marvel, the camera. Let them lift their eyes and consider that which is in front of the camera. There waits the model—Mona Lisa in the person of Mary Jones. What are you going to do with her? It would be well if photographers could forget for a while the expensive camera and its marvelous insides and the impressive array of chemicals in the closet under the stairs, and concentrate solely and definitely on the model. For it is through the model—whether it be goat or duchess—that life is made to stir in the dead substance of the picture."

Thus Mr. Mortensen in his latest book, and so writing he goes on to describe the methods and purposes of posing the model. From the first, says the author, it is necessary to consider the problems negatively for though it is possible for the instructor to warn the pupil about the many pitfalls confronting him it is up to the student, once he has understood the problems, to go on from there and create his own pictures in his own way. With this in mind, Mr. Mortensen proceeds to point out minutely, with text and illustrations, of which there are 268 especially prepared for this volume, the pitfalls and dangers involved in posing the Head and Face; Shoulders, Arms and Hands; The Torso; etc., dealing exhaustively with the special problems involved in posing each element of the body. Finally, the elements are brought together for the completed pose. Next, he deals with Costume and Costume Elements and with Pictorial Make-Up.

With the physical aspects of the subject completed, Mr. Mortensen then turns to consideration of the Model as an Expressive Element. As he says, the mere pres-

entation of a graceful pose is not enough to make a picture. Some meaning must be present to give the picture significance. Something to show that the photographer had more in mind than the mere recording of a figure, nude, costumed, or otherwise. The author describes fully the possibilities of the model as an expressive element, pointing out the limitations and probable sources of trouble as before.

Next Mr. Mortensen deals with the problems of directing the model or, in other words, the means of securing the desired response from the model. As the author says, this is really the most important phase of the problem and the one in which the artist most actively enters the picture; for without proper direction even the best model would be useless.

In concluding, a critical discussion of the most common faults in photography of the nude is given, accompanied by a series of sketches that afforded the writer an evening's hilarious entertainment. The sharp analysis offered here should serve as a guide post to steer photographers away from the perpetration of the errors described. A section is also devoted to the handling of groups of models and the legal aspects of the subject are discussed, including sample release forms.

The reader should understand that this is not a book of posing the nude figure only. Its early chapters on the physical aspects of posing are concerned primarily with the nude figure because in the last analysis the figure itself is necessarily the basis of any pose; but the information contained in this book is directly applied not only to the nude figure but also to the clothed or costumed figure, and to the posing problems of portraiture as well.

The Model is a book packed with invaluable material, presented in Mr. Mortensen's brilliant style that makes the reading entertaining as well as instructive. In the writer's opinion, this is this author's greatest book and undoubtedly one of the most helpful and instructive contributions to photographic literature ever written.

Composition for Photographers, by Richard N. Haile. Published by Fountain Press of London, England. American Agents, Camera Craft Publishing Co., San Francisco. 80 pages, 7½ x 10", cloth bound, price \$3.50.

When confronted with the necessity of studying the all important subject of composition, many photographers are "stumped" by the myriad of works from which to choose. "I haven't time to read them all, I must read one, which one?"

Mr. Haile's book is designed to aid the photographer in this dilemma for the author, with this in mind, makes no attempt to add to the lore of composition but rather to summarize the knowledge already available. Giving full credit to the leading authorities on the subject Mr. Haile offers an amazingly simple, clear-cut analysis making good use of illustration which is the most potent form of instruction.

In spite of the author's protests that he is adding nothing new to the fund on knowledge on this subject, it seems only fair to Mr. Haile to say that his presentation makes much of his old material new and in at least one case he has offered us material seldom mentioned in any photographic book on composition. This is in his chapter on COMPOSITION IN TONE which is of exceptional value to any photographer who wishes to make worthwhile pictures. In our opinion, this chapter alone is worth the price of the book.

Photograms of the Year, Edited by F. J. Mortimer. Published by Iliffe & Sons, Ltd., of London. American Agents, American Photographic Publishing Co., of Boston. 64 photographs, page size 8½ x 11", price paper bound \$2.50, cloth bound \$3.50.

This forty-two year old photographic annual has long since established its popularity. Readers have learned to expect a fine cross-section of photography from its pages and this years selections are no exception. Space will not permit comment on the individual photographs but the pictures, the review of photographic progress in England and throughout the world,

and other interesting data are features of the volume.

Emphasis In Pictures, by Nicholas Hâz. Published by Fomo Publishing Co., of Canton, Ohio. 71 pages, 7" x 10", cloth bound, price \$2.00.

It is a unique tribute to the abilities of an instructor when his pupils take the trouble to write to a magazine editor to express their enthusiasm and gratitude for the help they have received. In our experience this has happened only in the case of two teachers, and Nicholas Hâz is one of them. Mr. Hâz has evolved a method for taking the mystery out of composition. This is based on a method (original with Mr. Hâz) for analyzing a picture down to its bare essentials. He begins by defining nineteen visible differences by which such a simple image as a spot may vary in character. The combination, absence or presence of these visible differences determine the nature and effectiveness of the picture. The great virtue of Mr. Hâz' method is that it has been demonstrated that the amateur photographer who is confused by the subject of composition, quickly learns to analyze and criticize his own prints. The present book is concerned only with a single aspect of composition, the matter of Emphasis. The basic method, that is analysis by means of the nineteen visible differences is first carefully described. Mr. Hâz then proceeds to show how this analysis is applied in the building up of a picture. He shows what the visible differences are that add or detract from emphasis. With this understood the photographer has a concrete system and a clearly defined method upon which to plan the organization of his picture, so far as the matter of emphasis is concerned. The latter section is concerned with the analysis of a painting, a drawing, and three photographs so that the reader can clearly see the manner in which the emphasis has been established in each instance.

This book offers the sort of help that the amateur photographer is in need of and it is to be hoped that Mr. Hâz' treatment of the other aspects of composition will be published in short order.

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◆Ansco No. 5 Studio Camera and Stand, good condition, \$75.00. Vitax No. 5 extension lens, new, \$27.50. Hi Perkins Home Portrait Lamp in case, good condition, \$15.00. The Burns Studio, 1303 State St., Boise, Idaho.

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◆5x7 Home Portrait Graflex. 12" K.A. F:4.5 Lens. Cut Film Magazine. 6 Holders. Cases. Ansco folding stand. 2 Floods. \$135.00. P. O. Box 142, Sebastopol, Calif.

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◆Wanted, Focal Plane Shutter, size 8x10. Address all correspondence to Camera Corner, 431-14th St., Oakland, California.

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The "Perfect" Negative

William Mortensen

WE ARE told that a medieval author prefaced his chapter on The Snakes of Iceland with the statement "There are no snakes in Iceland." In a similar manner, the first fact that needs to be stated in any discussion of The Perfect Negative is that there is no such thing as *the* perfect negative.

Nevertheless, there is current in sundry publications a great deal of learned gabble concerning this non-existent entity. "Perfection" may have its place in theological or philosophical disputation, but it is not a quality that may be imputed to the photographic negative.

It is an unfortunate habit of the human race that it generally believes that because a thing is in print it is probably true. The photographic amateur seems to be particularly susceptible to the persuasive magic of the printed word. So he accepts without question the bald-faced assumption involved in the use of the term "the perfect negative."

There are two questions that should be asked of everyone that chatters eruditely of The Perfect Negative. Both these questions are somewhat embarrassing, and are guaranteed to cut short the learned discourse:

(1) Perfect for *what*?

(2) Did you ever secure any *pictures* from *your* negatives, perfect or otherwise?

He who talks of "the perfect negative" blithely ignores the fact that negatives must be secured under many different conditions and must be adapted to many different purposes. So the question "Perfect for what?" is very pertinent indeed.

Let me mention a few of these differing conditions and uses that render quite vain and absurd any attempt at an arbitrary definition of negative perfection.

Note, for example, the entirely different requirements for negatives for contact printing and for projection.

The negative suited for the conventional commercial portrait, which is a contact print, 8 by 10 inches or thereabouts, is full-bodied, with a

gamma of approximately 0.9. This negative must be somewhat veiled over in the shadow areas in order to permit retouching and to avoid harsh black areas in the print. In order to secure the soft luminous quality so sought after in professional portraiture, the light areas must be prevented from blocking up.

Certain types of commercial advertising demand a full detailed rendering of the shadow area. For this purpose, this area must be fully exposed for, and the negative should be developed, to about gamma 1.0 in order to fully record the textures of the shadows. Such a negative is more heavily contrasty than the one described above. Its purpose is to produce as vital and detailed a replica of the subject as possible.

An entirely different type of negative is required for *projection*, which is probably the commonest method of printing today. The full-bodied contact negative loses many of its half-tones when projected. If the amplification is considerable (as, for example, with a 35 mm. negative), grain becomes an important matter. Projection is the source of the majority of present-day Salon prints. For the production of the most interesting type of 11 by 14 Salon print (for straight bromide enlargement, Bromoil Transfer, or paper negative) there is required a rather thin negative exposed for the light area of subject matter that avoids contrast of both local colour and lighting. This negative is developed to *gamma infinity*. That is, it is developed for at least an hour in any one of the standard fine-grain developers.*

A negative of this type, resulting from this combination of exposure and development, will give the fullest possible pictorial illusion of *colour*. A conventional contrasty studio lighting, combined with conventional exposure and development practice, while yielding an exaggerated impression of modeling, will give little illusion of colour—no matter what pains are taken for colour-correction with fancy emulsions and filters. In such illumination as the author has described as the Basic Light**, the subtlest variations in colour are enabled to record themselves in their own terms, without any distracting or misleading elements of excessive light and shade.

Still another sort of negative quality is required for prints that are to be reproduced by the half-tone process. Reproduction by means of a coarse screen, such as newspapers use, demands that the subject be presented in three or four well-defined tones. Any fine discrimination of half-tones would in such a case be ineffectual and useless. With a fine screen, such as this magazine uses, it is possible to reproduce quite delicate gradations. But with either type of screen the limitation inherent in the half-tone process asserts itself; the "tone" persists in the lightest portions of the form of minute black dots, and there are white dots in the intensest blacks. In other words, there is nowhere a clean white or an outright

*Such extended development is unconventional but quite sound practice, and has been utilized in Europe by serious workers since the beginning of the century. The prolonging of development in Pyrocatechin for sixty or seventy-five minutes is a well-known usage. The author has during the last eighteen years developed all his pictorial negatives for at least an hour, and often for three or more. He has utilized in this way such diverse developers as Rodinol, Glycin, Borax-Metol, Metol-Hydroquinone, Glycin-Metol, Eastman D-76, Supersoup, Champlin No. 15 Micrograin and Eastman Ultra-Finegrain.

**Pictorial Lighting.

black. There is, therefore, a flattening at both extremes of the tone scale, but (with good workmanship) an excellent rendering of the middle half-tones.

So, for reproduction with a fine half-tone screen, the best type of negative is one in which the middle tones are fully presented. The contrast should be small; the negative should not be developed beyond gamma 0.7 or 0.8. But within this short scale there should be a full range of half-tones.

Different purposes, as we have seen, call for different sorts of negative quality. Different conditions of working will also dictate different sorts of negatives.

For example, the quality of the negative must correspond to the quality of the light. With an easily controlled light of a small range of luminosity, exposure would logically be based on the light-area of the image. If, on the other hand, the lighting was contrasty and not susceptible to control, the exposure would have to be fuller on the shadow side. With extremely contrasty lighting it would be necessary, in order to avoid completely empty shadows, to over-expose and "pull short" in the developer.

The quality of the press photographer's negative is also dictated by the conditions under which he works. He will seek a heavy negative and will expose fully for the shadows; for his primary problem is to get a recognizable image of *some* sort. The quality of the image is, for his purposes, a secondary issue. He will probably shoot fast and "wide open." And, because speedy results are imperative, he will harden the emulsion and develop in a hot solution.

The foregoing are merely a few of the possible variations of negative quality that are dictated by considerations of purpose and conditions of working. I do not include such matters as astronomical photography, photomicrography, etc., for the simple reason that I am not informed about them; but these, no doubt, have also their own peculiar negative problems. All of which goes to show how necessary it is to reply to the smug term "The Perfect Negative" with the question: "Perfect for *what*?"

This brings us to the second of the queries that I suggested at the beginning of this article as an effective remedy for any tendency to dwell upon the merely theoretical aspects of negative perfection: "Did you ever secure any *pictures* from *your* negatives, perfect or otherwise?"

It is surely a significant fact that these learned remarks concerning a purely theoretical condition do not emanate from experienced and practicing photographers. They come rather from two non-photographic sources: (1) scientific investigators and technicians who have never bothered themselves with the practical considerations of taking *pictures*; and (2) restless amateurs who, having failed to seduce the Muses, console themselves in the cold, precise arms of Science. The amateur, even though he has not secured a picture (and probably would not know one if he got it) has at least the satisfaction of knowing that he has developed his negative in Culpepper's Super-Quid-nunc for exactly seventeen minutes and forty-seven seconds at precisely seventy-one degrees Fahrenheit.

A considerable proportion of these more or less disgruntled amateurs is made up of retired professional men—doctors, lawyers, etc. These men are very prone to carry over their old habits into their new field and to wax diagnostic or argumentative at the drop of a hat. With the still more ignorant amateur their opinions are apt to carry undeserved weight owing to the prestige of their professional standing. The title "Doctor"—no matter whether the degree is in Divinity, Laws, Medicine or Dental Surgery—suggests that the owner must speak with authority when he pontificates on photography. In the days after the War, an English physicist who went psychic, received a great deal of attention for his remarks on the world hereafter because he happened to be an authority on the atomic structure of *this* world. As a matter of fact, the opinions of a physicist on psychic phenomena, or of a doctor on photography, are of no more consequence than the comments of a butcher on millinery.

All that is useful and valuable in these amateurs' remarks on negative quality may be found much more completely and succinctly stated in the instruction sheets that the manufacturers enclose with their films and papers. It is obviously to the manufacturers' interest to give the very best possible working directions for their products. But the amateur, instead of paying attention to these simple directions, is (like the White Knight) absent-mindedly

" . . . thinking of a plan
To dye one's whiskers green,
And always use so large a fan
That they cannot be seen."

So he takes some standard developer formula, takes half the alkali, twice the sulfite, adds a dash of *eau de Cologne*, and amazes his friends with his new grainless developer. The following week he takes twice the alkali, half the sulfite, tinctures it with three drops of vanilla, and—*violá*—a super-grainless developer.

If the amateur happens to be a retired corset salesman, the breathless interest of his amateur friends at each successive revelation may suggest the commercial possibilities of his inspired concoctions. So there presently appears on the market a streamlined bottle with a chromium stopper and an embossed label announcing Stoopnagles Hyper-X.

The important fact that is ignored by these gentry is that the negative—perfect or imperfect—is only a means to an end. That end is a *picture*. And a picture is not to be arrived at by calibration of "the actual lumens used, the indication by photo-cell or other exposure meter, the distance, stop, *exact* time of exposure and the emulsion."

A great deal of the personal element enters into the selection and use of the negative. The perfect negative for *you* is the type that yields you the best results. There is, between equally competent photographers, much difference in the types of negatives that they prefer to work with. Theorists about perfection in negatives also neglect to take account of the facilities for control in printing. A skillful worker can produce nearly similar results from different negatives and widely different results from the identical negative.

A recent writer on the subject of the negative declares that anyone that can get detail in the shadow areas without exposing for them has discovered "something new in photochemistry."

This sounds quite impressive, but it is not strictly true. The average negative material *can* secure, with the average subject matter, a fair amount of detail in the shadow area, even though the light area is the one exposed for. The modern pan emulsion is quite capable of registering a low lumen—provided that the developer is capable of resolving it, and that the subsequent operations, fixing, etc., do not wash it out. Some developers do not react on the low-excited area of the image.

It is true that such a negative may not, with ordinary printing methods, produce a print showing detail in both areas. This is due to the restricted range of the printing paper. But by proper use of Projection Control, holding back the thin shadow areas of the negative, it is possible to adapt the range of the negative to the range of the paper and to secure a print that shows detail in both the shadows and the light areas. And this is nothing "new in photochemistry." It is simply a device that has been known to practicing photographers for the last forty years.

It would be well if amateurs would learn to inquire a little more searchingly into the qualifications of those who presume to guide their footsteps. With the rise of photography there has also arisen a large volunteer corps of self-designated "experts." To all of these the amateur abandons himself with indiscriminate enthusiasm. Yet you may be very sure that this same amateur would not go to the plumber or the blacksmith to have his automobile repaired.

Therefore, it is well to add a third question to those that I have suggested. This is it:

3. Who says so?

What, in other words, are the qualifications of this so-eloquent author? Is he a physician? Or a physicist? Is he an ex-realtor? Or a veterinary surgeon? Or does he know this business of picture-making by actual experience?

It is perhaps inevitable in the nature of things that photographic amateurs should be Babes in the Woods. But let them at least be Hard-Boiled Babes. Let them cultivate a salutary skepticism and learn to lift a dubious eyebrow and to say "Oh yeah?" when the perspiring "experts" throng around them with advice.

Modern Photography

Nicholas Ház

THE word modern means of our time; the "now" not the "used to be." Photography is a modern technique of picture-making because it characterizes our time ever so much more than the painting techniques. Talkies in full-color, infra-red and stroboscopic (ultra-speed), photography are the most modern because they are the latest. Television is a future, more than a modern technique of picture-making.

In a hundred years they all will be hoary antiques. Modern, then, will be broadcasting to all five of the senses. (I dare to prophesy, since no one who reads this will be able to check up on its accuracy.) A transmitter will project pictures straight on the retina, tastes on the tongue, odors into the nostrils, feelings of touch on the skin, and, of course, sounds into the ear. The good folk of 2500 will be able to travel, never moving from the parlor sofa. Their evenings will not be spoiled by excessive advertising but by having to taste garlic, smell limburger, or dive into cold water inadvertently, through unexpected broadcasting.

But no matter to what unheard of extremes the technique of picture-making will progress, mentally we won't be able to advance, because our limits have been reached long ago. Even a million years from now no one will be able to picture anything but the following:

1. Make pictures of given objects at certain places and definite times. These will result in *concrete* pictures.
2. Make pictures to represent all of a sort, of all time and all places. These will be *abstract* pictures.
3. Make pictures which represent neither some specific object nor all of its sort. These will be *semi-abstract* pictures.

That is all we can do now, and have been doing ever since human beings have been sketching, painting, lettering, writing or otherwise making pictures.

If you are puzzled let me illustrate. Let us assume that some wag snapped a picture of you when you were yawning on your front porch on July 7, 1936, at 4:32 p. m. The data is written on the snapshot. This is a concrete picture.

Someone who does not know you and has forgotten when and where he saw you refers to you in writing as a "man." This, of course, represents



"Empire State Building"

Edward J. Steichen

Courtesy Vogue

not only you, but all men of all time and all places, so this word will be an abstract picture of you.

Then someone paints a portrait of you, undated, representing you as let us say a middle-aged person, the picture suggesting about twenty years of your life. Neither specific, nor general, this will be a semi-abstract picture of you.

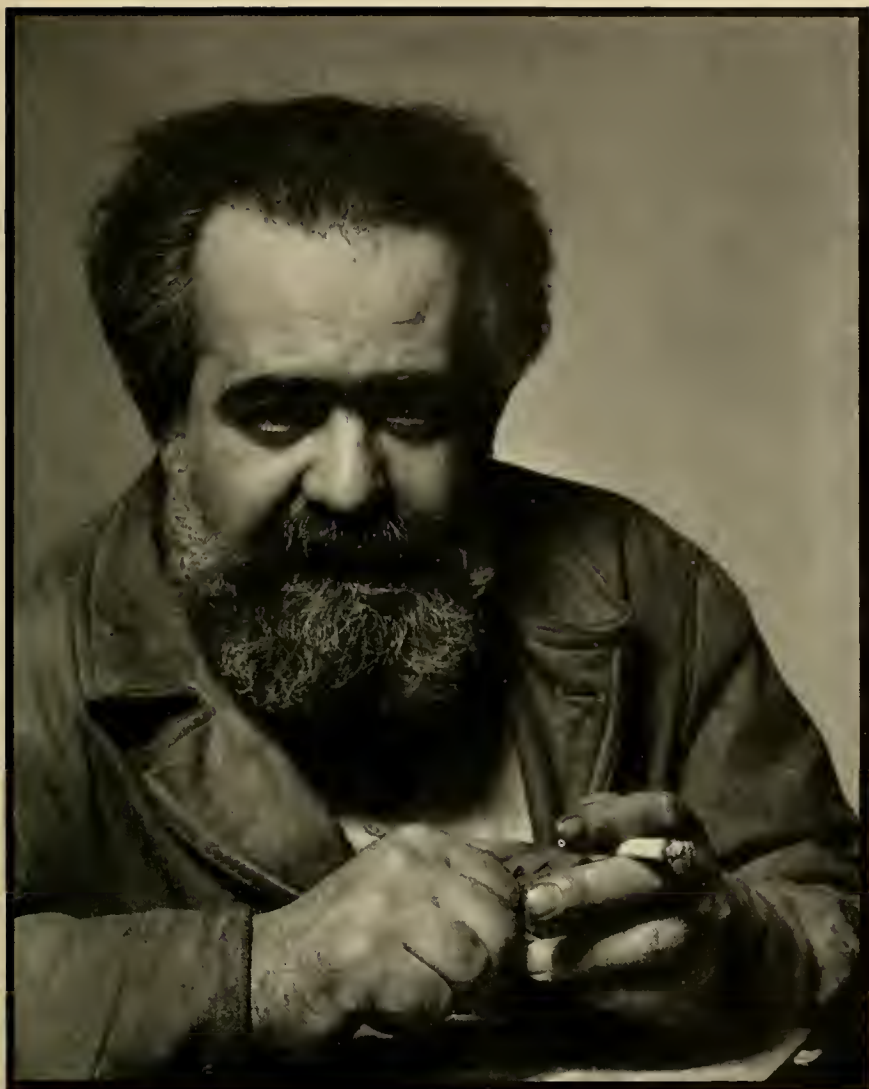
Now if you know of any human being who can go beyond these limits of representation of object, time and place, let me know his name, he probably can jump to the moon, too.

Real progress can be made in technique but not in the mental make-up of picture making. How is it then that some types of pictures are called "modern," others not so, *mentally* speaking? That is easy to answer. Long skirts are modern now, at least in evening gowns, but they were old-fashioned in 1928,—when short skirts were modern. Now skirts can only be long, short or of medium length. Whatever is just coming in again is modern, and whatever is just going out is not so. Fashions in photography ride on the same whirligig. Certain characteristics are coming in, others are going out, although they all have been with us all the time. Take glossy papers for instance. No self-respecting pictorialist would have printed his salon prints on glossy in let us say 1920, but now some of the best are actually doing this. Or, take soft focus definition. Once upon a time we swam in soft-focus, and it was all the rage. Just now soft-focus is comparatively rare, but that does not mean that some day it won't be "modern" again.

You want to know what is modern now? What are the mental earmarks of photographs which are bound to be considered modern by a majority of onlookers? If this article gets into print in, let us say, two months, the answer might be fairly fitting, but if this story should be shelved for a year or two, then it might be correct only in spots.

Modern photographers always strive for subject matter that is uncommon, extraordinary, preferably unheard of. Therefore they dislike sentimental, trite, often used ideas, no matter how the public loves them. They are shy even of the honestly lyric and romantic, because they consider them typically "picturesque," the legitimate property of painters or etchers. But if they have to use poetic or heroic subject-matter, they strain themselves to make pictures such as no painter or etcher could match. F:64 stops, color-sensitive emulsions, filters of all sorts will help them to attain this end. If they can find new, hitherto unknown angles of ordinary subject matter they will quickly take them. Happiest are they when they can photograph something that never was pictured before.

Then modernists like to make abstract and semi-abstract pictures of an unexpected sort. Cameraless photograms, an unheard of combination of mysterious objects, can be useful in making such puzzlers. Let us say, for instance, that a modernist wants to represent "time," an abstract idea, with abstract symbols. He won't use old man Chronos, nor even the hour-glass, because these are semi-abstract symbols that are too well known. But he may select a spiral, a mysterious line, that comes from the micro-cosmos, goes into the macro-cosmos and never stops. He declares this a



"Portrait of Jo Davidson"

Eugene Hutchinson

symbol of time. Although he might use a watch spring, or a whirling lamp to design his spiral, the result will be an abstract symbol. A new type of a symbol, representing an old abstract idea, might yield a picture which probably will be called "modern" either flatteringly or deprecatingly.

A modern photographer is not worried about the number rules of the painter and pictorialist. He will photograph a hundred thousand ducks or a single mothball, whether or not these be "significant," to quote Mr. Mortensen. It seems to me that the pictorialists have yet to lay down a clear-cut working definition of this rather overworked term. A modernist won't count his images to make them uneven in number, nor is he much concerned that the number of, or all parts of the whole should be accurately represented.

In U. S. Camera, '36, for instance, there is a man shaving himself, and not only is the razor hidden, but the hand and arm that hold it. Yet many of us consider the picture excellent.

Comparative size of images is not a matter to be checked with a micrometer, for the modernist. He is not worried about Jay Hambidge's Dynamic Symmetry. He will juxtapose gigantic size to tiny, or make all his images even in size, if all this helps the expression of his idea. A few modernists are well trained theoreticians in comparative size, but they never think that this, *alone*, will make their pictures good.

Position rules of the past are of no importance to the modern photographer, although he knows them and uses them when they seem justified to him. He will place his most important image in the center of the picture, put his horizon half-way up in a square picture plane, and will line up his images on a vertical or horizontal straight line, when he thinks that such positioning will be more expressive of his idea than anything else.

Normality of shapes is not sacred to the modernist. Of course if he wants to make his pictures immediately clear he will try for normal shape, but when he is inclined to puzzle the onlooker, he might intentionally distort by either a too near, or by a most unexpected point of view. He sometimes distorts for the sake of humor, or to accent an advertising idea, or to strike terror into the onlookers heart. Modernists don't think that they are under an obligation to match the average vista of the average onlooker.

In line composition the modernist is a true iconoclast. The "line of beauty," the S curve which Sir William Hogarth distilled from the figure of a woman, is a joke to him. He might put his main lines, all straight ones, in clashing contrasts to each other, or parallel to the edges of the picture-plane and if his picture tells its story better through this radical line-composition then he calls it good and beautiful.

He does not insist, always, on a full-range, richly graded tone scale in all pictures. While he is much in favor of tone-rendering of this type, he will, occasionally, restrain himself to only two or three light or dark grays, or will intentionally make his scale steep, in clashing contrasts of white and black. He thinks that tone-values are good servants of mood-making, and should be so used.

Color rendering is an important asset in the modernist's style of photography. But he will over-correct, or not correct at all, using a per-



Photogram, "Egg Slicer Fantasy"

Nicholas Ház

flectly color-blind emulsion, if he thinks that the idea he is trying to express will be better served by such rendering. He considers ultra-violet or infra-red rendering of colors just as beautiful as normal colors. A good color photographer may have a better understanding of color than the average painter, because he is not merely following his instinct in imitation of what his eyes see, but has to scientifically calculate on the ultimate result of his work. Whenever the technique of color photography overcomes its present gigantic limitation, the inability to see color as the human eye sees it, color photographers will bounce to the fore with a tremendous swing and all moving pictures will be produced in full color.

The favorite edge definition of the modern photographer is sharp. And the favorite depth of focus is as deep as possible. He is proud of his ability to give as perfectly defined images all over his picture as possible, and is not worried about the fact that the human eye does not see in this manner. He, in a snapshot, represents all that an eye can see during a *protracted* time, but instead of being ashamed of this he is proud of it. If the lens is a better optical instrument than the eye, why not take advantage of it, he thinks. But if he is unable to define sharply an object which he must take, then he will sacrifice sharpness and still be satisfied. Candid shots in bad light are examples in point.

To render the textures of represented objects perfectly, is one of his favorite achievements. He knows how to light the object, what kind of emulsions and filters to use, how to focus, develop and print to produce the best possible representation of textures. One of the main reasons for his usual dislike of soft-focus lenses is that they are such liars about textures. In order not to lose any of his carefully secured textures he prints on smooth surfaced papers, quite often on glossies, which he ferrotypes.

Plasticity and the rendering of distance are easy to a good modernist. He is usually a master of technique; clean, careful, orderly and honest in the selection and handling of his tools and materials—more often an educated thinker than a haphazard shooter. But while he sometimes stresses the voluminousness or the distance of the represented object to produce striking results, he also is at pains to suppress both plasticity and distance if the sense of the picture demands flatness.

To accurately represent dynamic movement, lively action in a still picture is one of the main glories of photography. The modernist knows that here he has the painter beaten, therefore he not only equips himself with a dandy set of tools, highspeed cameras, lenses and materials, but also uses them. It is amusing to see a pictorialist with a carload of fast cameras and lenses produce only steady, motionless, dignifiedly posed images of old men, or trees and rocks, as if he, too, was forced to sit in a studio and meticulously nigger away on small detail, as painters are. To catch fast moving models on the wing, and compose the picture well at the same time, is one of the greatest achievements of modern photographers. The photographer must have his wits about him, he must anticipate the movement because what he sees he can no longer photograph, and at the same time he must see that no superfluous or sadly missing image gums up his composition.



"A Dance Practice"

Martin Munkácsi

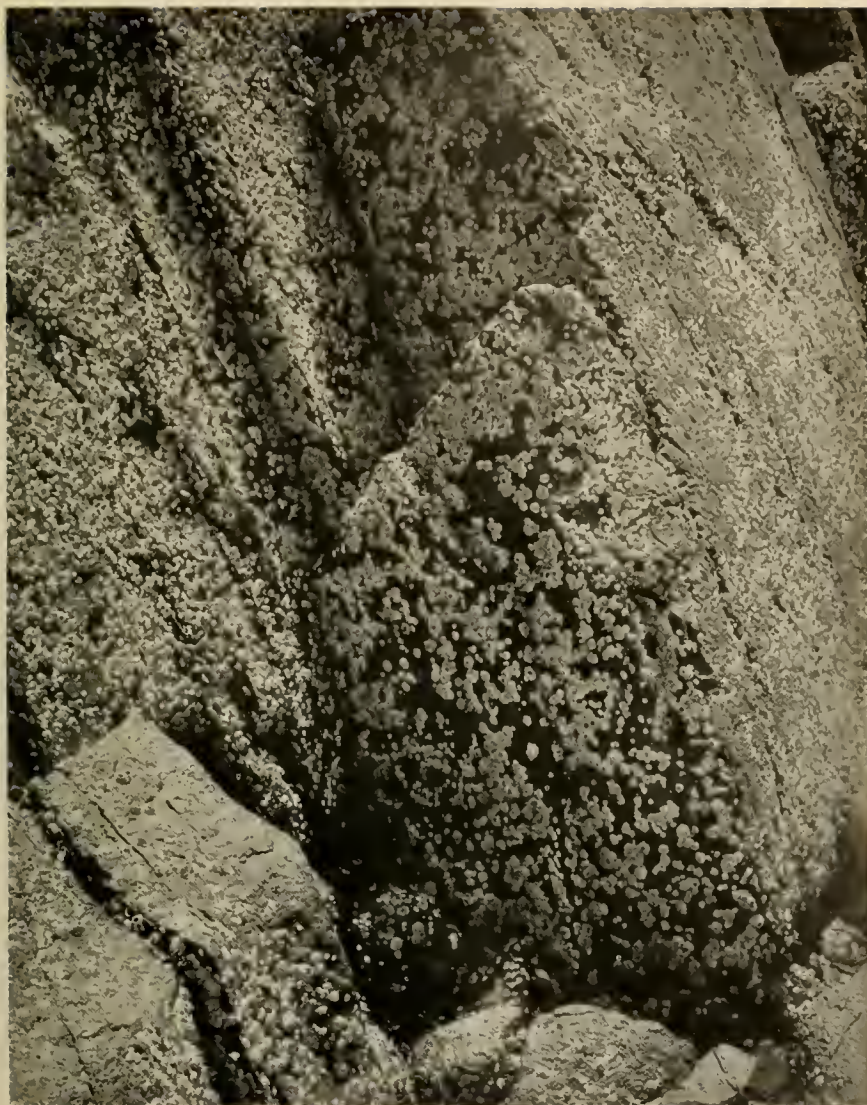
Photography is the only branch of picture-making in which intentional lack of balance is tolerable and even welcome at times. This applies mostly to news pictures in which some catastrophe is being shown. The maker, wisely, leaves his picture unbalanced to signify that what he is showing is important because something has lost its balance. But a modernist, otherwise, is as clever in balancing a picture as anyone else. He does not care for hand-lettering to balance his picture. He always relies on a judicious distribution of the photographed images to produce even weight.

The modernist is aware of the fact that if he includes only one idea in his picture, a unified graphic treatment becomes necessary. But he, sometimes, includes several ideas in one picture, especially when he wants to represent duration, the passage of time. In such instances he will avoid unity of the graphic representation. He, rather, will provide gaps, or lines, or other dividing agents to keep the ideas apart from each other.

Clarity is not a fetish with a modernist. He knows that the onlooker often likes to be puzzled and obliges him with intentionally unclear representation. Of course, he can be as clear as anyone, clearer than most painters or etchers, but when he makes up his mind that the onlooker should think hard to find the idea in his picture, then he can be as mysterious and hard to solve as any puzzle maker in the world.

A good modernist is a master of emphasis, but sometimes he won't make the obvious image, the main image. In other words he might, craftily, feature a more or less hidden image. He might, for instance, photograph a big still life of flowers, fruit, and other foodstuffs, and hide somewhere in the shadow a little mouse nibbling on a piece of bread. The title "The Intruder" will help to find that mouse, which, once found, becomes the main image. The modernist does not insist on a clearly defined center of interest under all conditions. He sometimes distributes the interest among three or more features and when he wants to he makes pattern pictures in which no single image is more important than any other one.

The modernist is not a devoted partisan of scattered, accidental, capricious looking free rhythm, but occasionally distributes his images evenly or in an alternately regular order. He also uses pure acceleration without any additional rhythm. In short a modernist is a picture-maker who is fond of resuscitating modes which seem to be definitely of the past, or are usually done by other sorts of picture makers. If he succeeds in lending new life to the seemingly dead, then, that which was highly fashionable while this was out, now goes into hibernation until a future radical brings it to life again.



"Rocks of Gloucester"

Kwang Csein Mei

Photography

and The Eye

R. W. Johnston

MUCH has been said and written about what constitutes the perfect, the universal camera. But so far perfection has not been achieved.

Perhaps the modern precision miniature camera with its battery of supplementary lenses is the nearest approach to all-round adaptability.

As an example of modern ingenuity one might mention the recent invention of a self-acting iris diaphragm for cine cameras. A photo-electric cell is used to regulate the size of the aperture according to the intensity of the light from the subject photographed, thus automatically ensuring a correct exposure for all lighting conditions.

Does it occur to us that Nature, in one of its most wonderful achievements, the eye, has produced the perfect miniature camera. Only one inch in diameter, it is capable of perceiving and recording objects 1/500th of an inch or even less. With a focal length of 18 to 20 millimetres ($\frac{3}{4}$ inch) and an iris diaphragm aperture expanding from 2 to 7 millimetres, it can, in the twinkling of an eye, focus objects from a few inches to infinity. It performs the functions of a panoramic camera, a telescope, microscope, telemeter and cinematograph. It faithfully records life sized moving objects stereoscopically and in color.

Even Nature itself, realizing the immensity of its creation, sets about the development of this delicate and marvellous piece of mechanism as a work of primary importance. The eye is the first organ to be developed in embryo. It is present in all animal life—except in the very lowest forms. It remains practically the same size from babyhood to maturity.

The lens of the eye is a compound convex known as the crystalline. It is separated from the cornea, the outer transparent covering, by means of the iris, the aperture of which is known as the pupil. The accompanying diagram illustrates these points in a simple form.

Light passing through the lens is focussed on the retina forming an

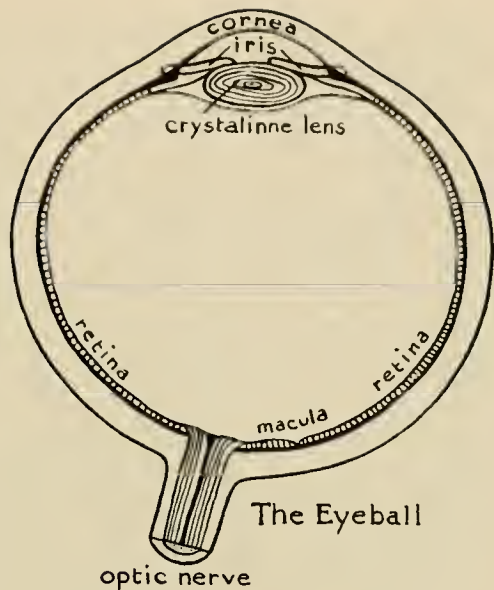


Fig. 1

image at the back of the eye. Each retinal terminal receives a stimulus from its corresponding point on the object, such stimulus being transmitted to the brain cell at the end of the fibre. Series of nerve impulses from specially adapted light receptors called Rods and cones cause impressions of varying intensity to be transmitted from the retina to the receiving set, the brain. Here they are deciphered. The exact process of mental interpretation is unknown. When the light reaches the retina and is communicated to the brain our knowledge with regard to vision ceases. We do not know the nature of the force which conveys the sensation of light.

The image formed on the retina is inverted as in a camera. By a process present in earliest infancy, an upright image is mentally projected. Even when the image on the retina is focused the correct way up from an object upside-down, it is mentally projected and seen upside-down.

The eye is provided with an auto-focusing lens. The curvature of the cornea and the extension of the eye-ball or globe is unaltered, but the crystalline lens involuntarily increases and decreases in curvature, thus allowing for wire-sharp focusing of an object at any distance.

A very small area of the retina, known as the macula, only 2.5 millimetres in diameter, is highly sensitive and capable of really critical vision. The macula is situated at the center of the axis of vision. The remaining portions of the retina are less sensitive and only assist us in recognizing general outlines. The field of direct vision is therefore restricted and subtends an angle of only 4° . At ten inches the image of a shilling will just cover the area of direct vision. The field of indirect vision is wide, being about 120° vertically and 150° horizontally. The faculty of direct vision belongs only to man and monkeys.



Fig. 2

In animals below monkeys, a specially visual area in the form of a narrow horizontal strip exists on the retina in place of the macula. Thus we may assume that dogs and other animals possess a large area of equally good vision, but in acute vision they are inferior to man and monkeys. This probably explains why dogs are generally unable to recognize a photograph or painting however lifelike it may be.

By reason of its comparatively wide aperture, the depth of focus of the eye is very shallow. The small depth of focus, coupled with the very restricted field of direct vision, is responsible for some bad blunders in pictorial composition on the part of the unwary photographer. The picture which the eye sees is not the picture focused on the negative emulsion in the camera. The eye looks at the object of interest to the exclusion of all else. When the principal object is close to the observer everything else not in the same horizontal plane, nor in the direct field of vision, is out of focus. When the object is a long way off, the foreground is out of focus, and does not form part of the picture as a whole. Not so with a camera of short focal length; in photography every object near and far is faithfully recorded by the lens on the negative. The resulting picture when printed on paper, and viewed in this form by the eye, shows everything on one plane in perfect focus,—sometimes with devastating results!



Fig. 3

The corrugated iron fence in the background is prominently in the picture and mars its beauty. The telegraph post 50 yards away shows up with exasperating sharpness, as if it were part of the principal objects in the foreground. In the accompanying illustration (No. 2) the artistic arrangement of the bottle brush blooms (blue *Ecchium*) and the little girl is ruined by one large bloom apparently growing out of the child's head. Even experienced photographers sometimes make a mistake like this. We have to cultivate the habit of looking at objects in their setting with a photographic eye.

But just as there is danger to good composition lurking in the unnoticed background, there is often beauty to be found in the immediate foreground. Beauty of composition which passes unseen to the untrained eye, is appreciated by the observant photographic eye. How often does a tree or foliage make a beautiful picture of an otherwise uninteresting outlook. To the casual observer the scene before him is commonplace and uninspiring; but the photographer by the skilful inclusion of suitable foreground makes an attractive picture. The untrained eye is unable to observe the near foreground and distant subject at the same time.

If the foreground in the last illustration were omitted, the picture would lose its interest.

Print Finishing Suggestions

William J. Aull, Jr.

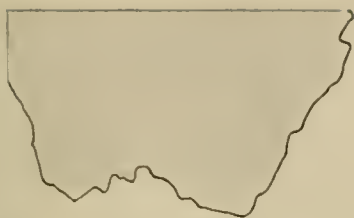
"**W**HAT one fool can do, another'n can." So it is in mathematics and art—why not in photography? There is much the pictorial photographer can learn from the architect and the painter, perhaps not about line, or form, or shades and shadows, but certainly concerning tricks of rendering and dressing up the finished print.

The air-brush has eased the life of the pictorial worker as well as the commercial man. For the amateur, an air-brush is an expensive device to own and really does not pay for its keep. There are, however, other methods of getting the same effect with little or no skill or cost involved.

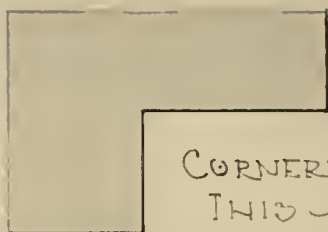
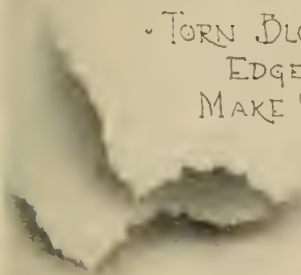
"Smootch," to the architect, is a word of dignity, its process saving for him hours of labored water-color work on presentation drawings. To the layman, it might be a combination of "smooth" and "itch." It really is a "smooth" process, having nothing at all to do with "itch." In short, it is the laying on of chalk dust with cotton swabs to form backgrounds, clouds, figures, or whatever is needed to finish the composition.

The photographer working on a black-and-white print has little use for color so will confine himself to grey and black chalk dust of fine quality. Graphite pencil dust, or "crayon sauce" as it is called in the East, may be used equally well. For a quick method, a soft pencil, 3B to 6B, is rubbed heavily over and over again on a piece of rough scrap paper, and a wad of cotton, lightly rolled in the fingers, is brushed over the black scratchings until some of the pencil has adhered. The swab with the black on it is then rubbed over the face of the mat-finished print wherever lights are to be darkened. Tones can be built up where needed, or clouds added by roughly tearing a piece of paper in the general form of a circle and brushing the cotton over the edge of the paper, using it as a mask. Straight lines may be added and edges strengthened by using a piece of paper with a straight, long, clean-cut edge, brushing over it in the same manner as above. A little practice, and one will find that he is able to produce a graded wash or a flat tone with great ease. It will be well to remember that this technique will not work at all on prints with a glossy finish.

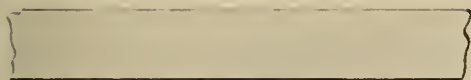
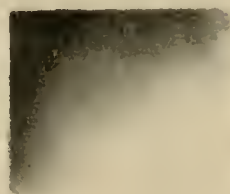
The more advanced worker, wishing to get a clearer understanding of the tones he is matching or building up, could use transparent celluloid of .005 thickness. This weight of celluloid cuts readily leaving a clean edge, and is advantageous in that when laid over a design, the picture, in true tones, may be seen underneath.



• TORN BLOTTER
EDGES
MAKE CLOUDS!



CORNERS
THIS



• STRAIGHT EDGES TOO!



CUT-OUTS FOR
XMAS CARDS

To the gentlemen of the profession who work in the paper negative media, this "smootch" method will undoubtedly please, inasmuch as large, flat tones can be added without showing evidence of having tampered with the original while work on the final print is easily handled and has all the quality of a true photographic tone.

A little trick used by architects in connection with the medium is the skillful application of the ruby eraser to lighten or "highlight" edges of structural shapes closest to the light. The larger eraser or art gum may be used to completely take out a wash. This is often a life-saver to the worker who cannot help doing it all wrong the first time.

Pencils alone, either of the Negro or Wolff type, may often be used



"Smooched Clouds"

Wm. J. Aull, Jr.

to edge prints to keep the composition within the frame-form. Stumps made from a rolled-up blotter may be used as the cotton swab in the smooch technique to put frame-lines on mountings. A judicious use of both stump and black Negro Pencil will often "make" a mounting that would otherwise fall quite flat.

Artificial air-brush lines surrounding the photograph on mountings may be made by the smooch method. A mat a little larger than the picture opening is cut and the cotton swab brushed inwards, making a slightly graded wash. This may be strengthened by running the swab parallel with the mask.

Technique in mounts and mounting can be acquired only through the trial and error process. However, the situation existing with most amateurs is that they have never even tried. Mounting of prints for exhibition and mounting for salons are widely separated subjects. The salon mount is a "cut and dried" affair, actually "cut" to so many inches by inches and really "dried" that way (under pressure). All prints, and especially those for private show, should burst forth from their settings, gleaming with the personality of their maker, for he is the artist, the creator, the maker of the thing, and a true artist strives to have his work look well ensemble. A deep, rich print of a lusty cowboy would scarcely look well in a pink and orchid setting; neither would Milady at the Coiffeur look well framed in hempen rope.

To you pictorial amateurs who have tried and lost, or never tried at all: DO SOMETHING—and keep at it until you acquire a style. Let it be your style alone. Then, and only then, will the path to your darkroom door be worn thin by the tread of inquiring thousands.

One thing more (the elite say, "in closing")—sign your prints, and sign 'em with a vim. There is always a bald spot in the lower right-hand corner or perhaps elsewhere in the print. Fill it up. Fill it with your signature, but do it well. Study a pleasing arrangement of letters and letter style, and let it be your signature. Then use it. But do it well!

Camera Club

Presidents

Hillary G. Bailey, F.R.P.S.

I SUPPOSE that most folks would insist that being the president of a camera club is not much different from being chief executive for any other organization, but that is because they are inexperienced in promoting peace campaigns among silver nitrate picture hounds. Choir leaders and orchestra conductors, perhaps, have some faint idea of the extent to which dark room magicians can concoct fanciful injuries over which to pitch verbal brick bats, for musicians are funny that way, too.

Of course, there are many headaches in common to all clubs; so many in fact that it would seem that club presidents in general are just good natured saps who have let themselves in for punishment on a grand scale. Those who can take it the longest make the best executives.

By some twist of mental calculation a club president basks in the delusion that his position is an honor respected and appreciated by less fortunate and less successful mortals. Maybe it is the dignity of the potentate which dazzles his reason, or something. Occasionally there are those who imagine that their picture will appear in the newspaper (at least, back near the burial notices) for the envious adulation of unforgotten men.

All this takes place before election. Afterward they marvel at their own gullibility, and wonder how normal persons as wise as they have always insisted themselves to be could have allowed themselves to be taken in. They early learn to sympathize with the unfortunate colored gentlemen who stick their heads through holes in a canvas backdrop at street fairs for sadists to throw baseballs at three shots for a dime.

Camera club presidents get off to their measure of extra misery because of those meetings devoted to perpetuating the agonies of the ancient Spanish Inquisition customarily called print criticism. Such times are periods of terrible suffering; either the suffering which the honest truth presents or the suffering which the diplomatic lies promote.

In every photographic group there is always one or two earnest members who display their painstaking productions stating that they want to know what is the matter with them. They loudly proclaim their ability

to take criticism; they insist that their feelings can not be hurt; that their only concern is to improve their artistic presentations; and that anything said pro or con will be taken in the right spirit; and so on.

It is funny how such a request can be taken literally by club members. They seem to think that if there are those willing to ask for it they shouldn't be disappointed, and do they take the displayed prints apart? Seldom are the so-called inquiring ones left unplucked. They usually are allowed to go home looking like a sucker in a night club—nothing left but the pin feathers.

Heaven help the camera club president who gets involved in one of these cleanings. Rarely do these seekers of advice mean all the things they say. More often than not they are spoofing. They want praise, not criticism, and all the bluff about wanting opinions is intended to be subtle fishing for admiration. Actually they think that their snap shot enlargements are pretty hot stuff, and the least suggestion to the contrary is to them what a red flag is to a bull.

Particularly is all this true if the prize print under discussion at the moment happens to be a nude. Oh, my, oh, my. Nudes are dynamite in a print criticism anytime. To strip a woman of all adornments except her bath powder is good for an argument in any meeting place, and to drag in a camera somewhere only increases the pitch.

More often than not the human handicraft undergoing exposure is female, and the fair sex today does not share Mother Eve's opportunity to keep physically fit. Ten chances to one the undraped figure in this instance shows the need of lengthy and arduous calisthenics to rearrange the hills and valleys of her geography. And as sure as that fact is evident some hypo hound will point out the discrepancies in the lady's form which failed to be divine. Art for art's sake may be a grand thing but too often it causes devoted photographers to forget the diplomacy of golden silence. To make matters worse, there is still the further dreadful possibility that the nude of the moment is the exhibitor's wife, sister or daughter posing for the sake of art. If so, lightning will strike at most any moment, and the club president only hopes that it will.

To pile insult onto injury if the picture has been made in a low key some metol addict is sure to pop off with:

"The print is too muddy."

Or if the reverse be true and there is much white paper in evidence, then the pyro stained neophyte will exhibit his newly found training by exclaiming:

"The negative is all chalked up."

By now anything can be expected and no one is disappointed. From the back row comes the comment that no lady would be a lady in that position, and immediately that commentator wishes he had never said a word for he must defend himself and that may prove embarrassing.

No print ever escapes someone's suggestion that the composition isn't what it should be. There is always some dude who wants to argue on this subject. The undressed lady now is forgotten during the heat of the war on what composition is or what composition is not. This stage of the combat always pleases the president. He knows this fight will always result in a



"Reflections on Water"

Gustav Seiden

20th Los Angeles International Salon



"Chrysanthemums"

Juzo Uchida

20th Los Angeles International Salon

draw. It always has, it always will. And its discussion is less delicate than the lady without benefit of covering.

There is an old bromide which says that man can, if he will, get accustomed to anything except hanging. It is a comforting observation to camera club presidents. They learn to become acclimated to the shadow boxing, the slugging, and the cries for raw meat. They appreciate that not all battles will be bloodless. That sooner or later someone will get hurt and the club's roster will shrink. But they also learn that camera club members are gluttons for punishment. They may get tough and swear off but they usually come back for more.

Maybe it's another expression of the cave man instinct. Maybe it is the release of certain inhibitions which can not be turned loose in the office or at home. Maybe all the fuss and racket at each other are escape emotions and therefore less harmful than the smoke of battle would indicate.

In any event the camera club president soon learns to forget the noise, to shrug his shoulders and let them tear each other apart. He may even go so far as to have a new portrait made in case he is reelected and the newspaper appreciates the importance of the event, proving that he differs from the chief executives of other groups only in the degree of his ability to take it.

Cine Section

Edited by

William A. Palmer

Night Movies Without Electricity

THERE are still many places in this world where regular electric power is not available. It is also desirable sometimes to take movies in these places when there is not sufficient natural light for exposure. Scenes at night or interiors where there is no regular electricity are a problem, but there are several ways in which successful shots can be made.

Many locations have some sort of permanent electrical systems which are entirely inadequate for furnishing the power necessary for motion picture illumination. A common type of farm lighting system often used at summer resorts furnishes fine illumination for seeing purposes, but the voltage is 32 volts, too low to supply the regular photoflood lamps. Special high wattage 32 volt bulbs can be obtained, but the systems can supply only a limited number of them. Another type of farm lighting system furnishes 110 volts and these can supply a limited number of photoflood bulbs if the regular load is removed. In other words the photoflood bulbs take enough current so that other regular lighting fixtures and appliances must be turned off.

How many times have amateur movie makers wished that they had some equivalent to the photoflash lamp which still photographers use so easily when they need artificial light? Well, there is something that is partly the equivalent, since there is no power supply required. The metal Magnesium when burned gives off a very powerful white light that is excellent for photographic use. This has been used by the I. C. Newman Company of 6 East 45th Street, New York, N. Y., in their "Newmanlite" flares for night photography.* These flares have been used for years by the newsreel men who must get their shots under all sorts of adverse conditions. The flares give a very intense white light, much more brilliant

*"Meteor" Photo Flares are also available through Bell & Howell, Chicago, Ill., and can be used in a manner similar to "Newmanlites." Exact exposure data is not available at the present writing for Meteor flares, but it can be obtained from the distributor.

than any single mazda lamp. They are made in different sizes to burn from 30 seconds to five minutes. Ordinarily the 30 second size is sufficient for one scene, for most motion picture shots run 15 seconds or less, leaving a few seconds to get set after the flare has come to full brilliance.

The main disadvantage of the flares for illumination is that they create a great amount of smoke as did the flash powder used for still photography before the introduction of flash bulbs. There is no particular difficulty when the flares are used out of doors, for they can usually be placed so that any slight breeze can carry the smoke away from the scene. If there is no breeze, the smoke will generally rise straight up so as not to get into the field of view.

The flares are made in the form of cylindrical cartridges about an inch and a half in diameter and eight to twelve inches long. The bottom is an open cardboard tube which makes it very simple to place the flare over any upright stick or rod. At the top is a fuse which can be lighted with a match. They can be obtained with electric squibs so that they may be ignited by the current from two or three dry cells connected in series.

Some form of stand must be provided for the flares, for they cannot be burned safely in one's hand. They create intense heat and are apt to ignite any inflammable material within two feet of the flame. Metal tripod stands which are ordinarily used for photoflood lamp reflectors will serve to support the flares. Any cross arms can be removed and the flare merely placed over the upright rod. If any amount of filming with flares is going to be done, it is well to make some sort of a reflector. This will serve to increase the efficiency of the lighting 50 to 100 per cent. A reflector for the flares must be a good size, for it must be kept a foot or so away from the flare. Such a reflector can be made from a sheet of tin about three feet square bent around a semi-circular piece of wood as shown in figure 1. The stand must be heavier than the regular photoflood units to support the weight of such a reflector and can easily be made from wood. The parts necessary are an upright 2 by 2 inches square with four "feet" nailed or bolted on in the form illustrated. The "feet" can be conveniently cut out of rectangular pieces of 1 inch wood as shown. Each piece makes two "feet." The upright should be about six feet tall and have the semi-circular piece nailed and braced to the top. The sheet metal reflector is then nailed on to form a section of a cylindrical surface. The top of the reflecting surface should not be closed with a piece of wood like that which forms the base, because the smoke must be allowed to rise unimpeded. The reflecting surface can be shiny metal or painted aluminum. The latter is preferable.

One or two flares are sufficient to light up almost any scene in which the subjects are within 30 feet of the camera. More than two flares are not recommended, because there is apt to be too much smoke and it is difficult to get all of them lighted at the same time. The flares should be placed to either side of the camera and 3 or 4 feet back so that the smoke will not get in the camera view if it rolls forward a little ways. There must be no object within 3 feet of the burning flare (except the reflector) for it will be scorched by the intense heat. This is particularly true with

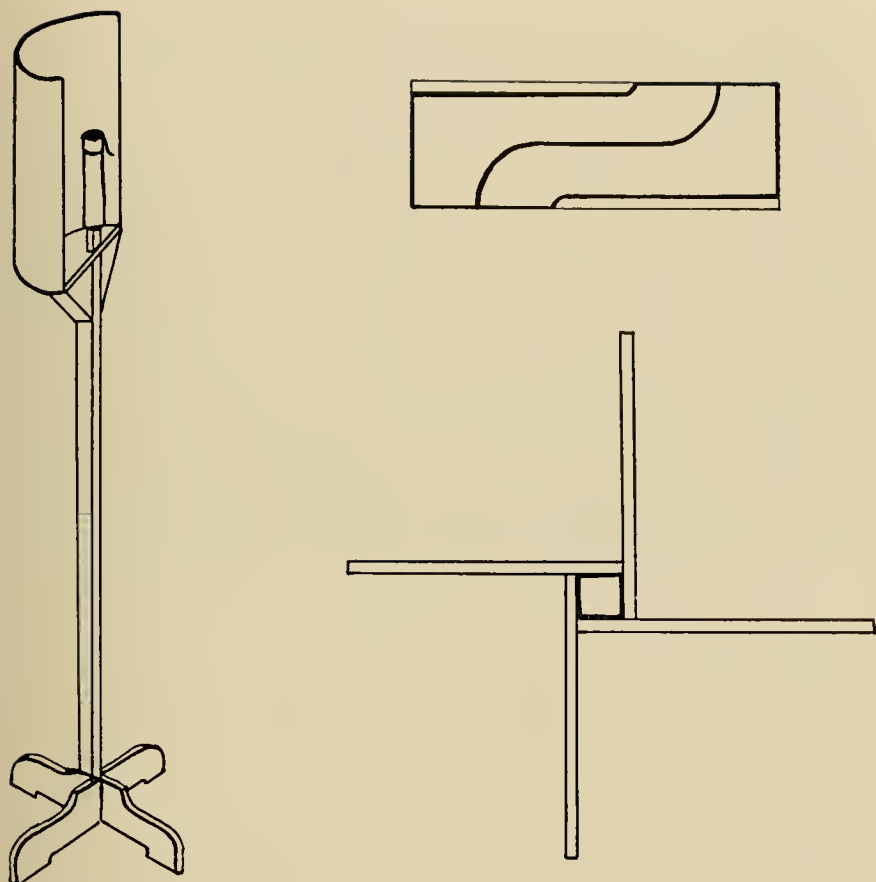


Fig. 1

objects directly above. Since heat rises the flare can easily ignite an inflammable object 3 feet above it.

The proper exposure to use with "Newmanlite" flares can be determined by use of a photocell exposure meter. Since the light is white, very nearly approaching sunlight, the film speeds for daylight should be used in setting the meter. In using 30 second flares one obviously does not have very much time to take a meter reading, set the diaphragm, and be ready to shoot, but if one knows exactly what to do it can be arranged. The focus should be set, the camera placed on its tripod properly trained on the scene, and the diaphragm setting estimated. With the exposure meter in readiness, the flares should be lighted and when they have come up to full brilliance the exposure setting can be checked quickly, a slight alteration made if necessary and then the camera started. When the flares are lighted, the fuse first burns into the ignition material and then there is a fairly bright yellowish glow for about five seconds, after which the second intense white light appears. The camera should not be started

until this second glow arrives. When the flare has spent its energy, it dies out at a rate that makes a beautiful fade-out if the camera is allowed to run on. Because of the white color of the light, it is satisfactory for Kodachrome shooting with the regular daylight film without filters.

Obviously, with so much smoke being emitted, the flares are most suitable for photography out of doors, but in some instances they can be used successfully on interior scenes. In industrial plants where there is good ventilation and high ceilings one can usually get enough footage of a scene before the smoke gets in the camera field. Electric fans directed out of open windows behind the camera will successfully draw the smoke away. So powerful is the light of the flares that one can photograph large scenes in industrial plants that would be impossible to shoot with photoflood lamps without a terrific number of units. One flare gives the light equivalent of 12 to 15 photoflood bulbs.

For those who do not use photocell meters the following table will give an idea of exposure. These stop settings are given for medium colored objects. Very light or very dark scenes will need some alterations.

Exposures With "Newmanlite" Flares

Basic exposures for 1 flare without reflector, 16 frames per second.

Distance from flare to subject	Exposure Super Sensitive	Exposure Regular Pan	Exposure Regular Kodachrome
	film	film	film
5 feet	f11	f8	f5.6
7 feet	f 8	f5.6	f4
10 feet	f 5.6	f4	f2.7
15 feet	f 4	f2.7	f1.9
20 feet	f 2.7	f1.9	-----
30 feet	f 1.9	-----	-----

Exposures with two flares use one stop smaller than table shows.

Exposures with flare in reflector reduce aperture $\frac{1}{2}$ to 1 stop.

Metallic Magnesium in the form of ribbon can be used for furnishing light for movies. The ribbon can be purchased from industrial chemical supply houses and lengths of it will give a brilliant glow for a number of seconds depending upon the length used. It is not anywhere nearly so brilliant as the flares but can be used to light a scene in which the subjects are within about 8 feet of the burning ribbon. As in the case of the flares, care must be taken in handling the material for it is intensely hot while burning. A good way to use the ribbon is to fix a sheet of hard asbestos on a stand in a vertical position. The sheet can be rectangular with a long side, of about 3 feet, the vertical dimensions. A 2 or 3 foot strip of ribbon can then be hung down from a nail or screw at the top of the sheet, the asbestos serving as a reflector and protector both.

The burning Magnesium ribbon also gives off a great deal of smoke and must be used in such a way that the smoke does not wander into the camera field. Because the ribbon is made in different sizes by different manufacturers we cannot give specific exposures, but the stop settings can be determined by use of a photocell meter. The straight Magnesium, like the flares, gives a very white light for which the daylight emulsion speeds can be used.

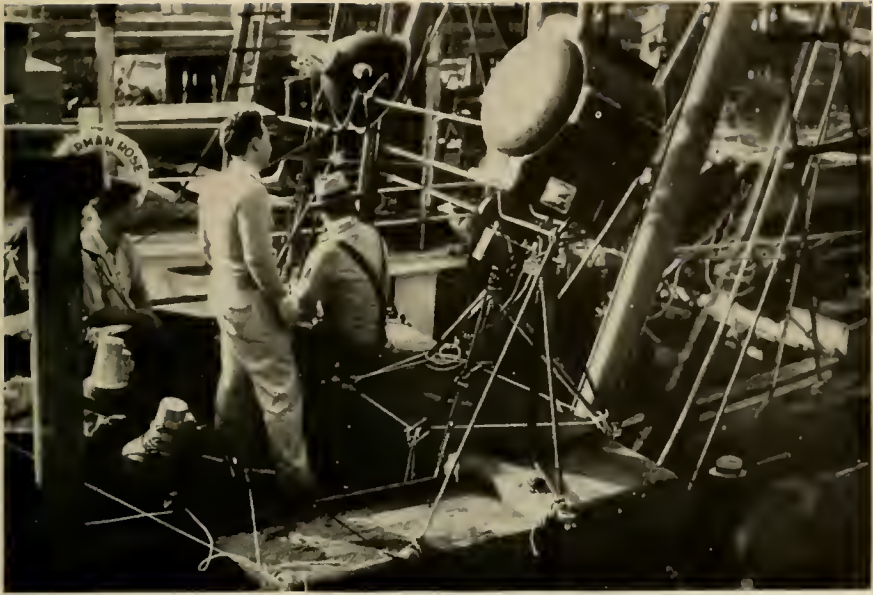


Figure 2. Battery operated lights lashed to sardine boat. The light on the left is known as a "rifle" because of the spiral shape of the mirror glass reflector. The right hand light is a "sun spot," having a means for adjusting the size of the light beam thrown. Each of these two lights in position and two others shown lying on deck were equipped with 2,000 watt bulbs and the total 8,000 watts were supplied by the twenty, six volt storage batteries.

Portable Sources of Electric Current

When the smoke created by burning Magnesium and flares makes their use impossible, one can resort to sources of electricity which can be moved about fairly readily. There are several types of gasoline driven generators which can be carried in a small truck and which will supply current for about six number one photofloods. The Kohler 1500 watt electric light plant is ideal and one of these units can usually be rented in almost any large city. They are automatic in operation and furnish 110 volts of direct current.

In places away from electric lines where a great deal of current is needed for a short time, storage batteries can be used. Recently during the filming of an industrial picture it was necessary to shoot the operations of sardine fishing. Sardine fishing is always done at night and the small boats, although possessing a generator for their own lights cannot supply the power necessary for photographic needs. A great deal of light was needed to illuminate the fishing operations, since they took place about 30 feet from the nearest possible position where lights and cameras could be safely placed. Four large lighting units were used, each one having a 2,000 watt "movieflood" bulb, the big brother of the photoflood. Twenty ordinary automobile storage batteries were placed aboard the sardine boat and connected in series to give a total of 120 volts. These furnished a com-

pletely reliable source of current for the limited time the big lamps had to be burned. These four bulbs took enough current to light 40 ordinary number one photofloods.

Storage batteries, while heavy and cumbersome, are not expensive, for twenty can be rented for five dollars a day and with ordinary lighting with six to a dozen photoflood bulbs, the batteries are not discharged very rapidly. The only difficulty is obtaining the necessary "jumpers" to connect the batteries together, but these usually can be supplied by any large battery supply house.

For small scenes where a limited area is included in the camera field, a group of six automobile headlights (purchased from a wrecking yard) without lenses can be used. They should be equipped with 32-32 C.P. bulbs with both filaments lighted. These can be operated for a limited time on ten to twelve volts furnished by two heavy duty storage batteries. When these 6-8 volt bulbs are overloaded at 10 and 12 volts they operate like photoflood bulbs, giving greatly increased illumination but having very shortened lives. For this reason they should be operated only while the camera is running. Since there is a heavy current drain from the batteries, they must be re-charged frequently and the wires supplying the bulbs must be heavy to avoid excessive voltage drop and over heating.

Questions and Answers

Question: Can the finder be used for centering titles?

Answer: No. The finder being at a different position than the taking lens will not see the scene from the same angle. In ordinary scenes this does not matter, for the finder had been adjusted to approximate the field of the lens. In an extreme closeup or title, the difference of position between the finder and lens is enough to throw the finder accuracy badly off. Some finders have a parallax adjustment to take care of this for moderately close distances, but none are accurate enough for distances closer than two feet.

Question: What is the proper length for a movie title?

Answer: A good plan is to photograph two seconds for each word if the title has under five words and a second for each word after the five. It is usually sufficient to read the title through twice while it is being photographed to expose enough footage.

Question: What is the emulsion speed of positive film for direct titles?

Answer: It is impractical to judge title exposures on positive film by the use of any exposure meter since the color of the light illuminating the title and the type of developer used make a great difference in the contrast and density. To get the best results on positive film, one must make a series of test exposures and develop the test for a known period. Then the best exposure should be selected and the rest of the titles developed in the same manner as the test.



"Skier"

*Rex L. Wakefield
Los Angeles, Calif.*

Advanced Medal Print

■ Mr. Wakefield's picture is nicely photographed, well arranged, and the camera angle selected makes full use of the cast shadows to enhance the composition. It is obvious that the principal objective in making this picture was to achieve an interesting composition. The position of the feet, however, do indicate that the subject is in motion, and even though the idea of action is definitely secondary in this picture, we think that the feeling of movement could be more strongly conveyed. It is obviously impossible to actually show movement in a still picture, and consequently that idea must be conveyed by suggestion. To make such suggestion effective each detail in the picture must conform. This is especially true in a picture which has been posed to suggest movement. In such cases the most insignificant detail, wrongly handled, may shatter the illusion. For example, the ski pole in the present picture is centrally placed and almost parallel to the sides of the print. Both factors suggest a static condition. The idea of movement would be more strongly conveyed if the base of the pole were further to the right, with the pole slanting to the left. To point out a still more insignificant detail that detracts from the illusion of movement, observe that there is an imprint of the ski pole ahead of its present position. Even though this might happen in actual skiing it nevertheless conveys the wrong suggestion pictorially.

Data; Rolleicord; Carl Zeiss Triotar, F:3.8; 1/50th sec. at F:18, on Agfa Superpan; no filter; 10x12" print on Agfa Brovira Royal, in M. Q.

Second Award

Advanced Class



*"Builder of Tomorrow" Dr. Max Thorek
Chicago, Ill.*

ordinary room illumination; 11x14" final
Novabrom #10, developed in D-72.

■Dr. Thorek has caught good action and a splendid expression in this picture. The twist of the mouth shows quite clearly that our young engineer is well aware of what may happen to his fingers if he is not careful. This picture affords illustration of the advantages inherent in the paper negative process when well handled. Textures and gradations are well maintained, and the photographer is able to eliminate or subdue any object which tends to attract too much attention. These corrections have already been well attended to so we can not point them out in the present print. We can be fairly certain, however, that under ordinary uncontrolled room illumination the board in the lower left corner would photograph much lighter in tone than it now appears, and we can readily see that it would constitute a distracting spot if the photographer did not have such matters under control.

Data: 2¼x3¼" Graflex; 1/5th sec. at F:4.5, on E. K. Verichrome film, in DK-50; by print on E. K. Opal G; paper negative on

Third Award

Advanced Class

■It would be a simple matter to wax rather poetic over this picture, conjuring up some fanciful relationship between the soaring stripes of graduated tone and the music emanating from the orchestra. At least it is clear that the print offers opportunity to let the imagination run riot. Those who prefer to take their pictures less emotionally may derive pleasure from the subtle gradations of tone, and the repetition of these, viewing the picture primarily as an abstraction.

At any rate Mr. Rothschild has found a point of view that gives a striking effect. We would hesitate to say that the print goes much beyond that.

Data: 4x5" Speed Graphic; 135 mm. Zeiss Tessar; 1/10th sec. at F:4.5, on Defender X.-F. Pan., in Pyro-Metol-Acetone; 8x10" print on Defender Velour Black I in Amidol.



"Rhythm"

*Otto Rothschild
Los Angeles, Calif*

Fourth Award

Advanced Class

■ This print affords a splendid example of how a most effective picture can be made from extremely simple materials. All we have here is the one powerful sweeping line, and the textural qualities of the foreground, and yet few will deny that the two combine to form a most interesting picture. It is the most interesting to observe the effect of trimming from the right upon the strength of the oval shaped leading line formed by the dune. Notice that the more we trim from the right, the greater is the



"Sand Ripples"

*William Hart
Pasadena, Calif.*

apparent momentum or "tension" of the line, if we may use those terms for want of more explicit words. This is due, of course, to the fact that as we trim from the right the leading line then carries the eye nearer and nearer to the right edge of the picture. That is to say that it sweeps more fully through the whole expanse of the picture and consequently appears more active and more dominant. The trimming problem then boils down to deciding whether we want to emphasize the active qualities of the line or the more quiescent qualities of the foreground texture. Personally we like the picture best with greater emphasis on the sweeping line, and would therefore trim from the right almost two thirds of the distance into the peak of the dune, and about half that much from the base for the sake of print proportions. A slightly more vigorous print would help to lend emphasis to the line as well.

Data: 9x12 cm. Voigtlander; Skopar F:4.5; 1/25th sec. at F:16, on E. K. Panatomic in DK-50; K-2 filter. 10x12" prints on 16x20" mounts may be obtained at the price of \$5.00 upon application to Camera Craft.



"Steel Worker"

*Louise Stinde
St. Louis, Mo.*

Fifth Award

Advanced Class

■ To our eye the principal merit of this picture lies in the fact that it records an action that is seldom photographed. The flying sparks are really the whole thing here, so why dilute their effectiveness by surrounding them with so much uninteresting space. It is well to remember that any audience likes to get as close to the scene of action as possible. The more we surround the essential element in our pictures with unnecessary space, the further away we force our audience to remain. The picture appears
(Continued on Page 245)



"If I Were A Bird"

*Van F. Dunlop
Rialto, Calif.*

Amateur Medal Print

■It can not be denied that Mr. Dunlop and his lovely model have succeeded in revealing to us something of the emotional response which the beauties of nature call forth. This is perhaps one of the most difficult forms of pictorial expression and calls for the fullest understanding on the part of the model and the most subtle direction on the part of the photographer. Further it should be observed that the pose adopted, particularly the arrangement of the model's left arm, is an extremely difficult one to carry out without appearance of strain or insincerity. On the whole we feel that it is successfully done in this case, though one wonders if the picture might not be equally effective with the left arm in a more restrained gesture. Our one disappointment with the pose is due to the fact that the tip of the nose and the right eye coincide, thus slightly confusing the structure of the face. This could easily have been corrected by turning the head a bit to the model's left. We feel that Mr. Dunlop has shown such marked progress in recent months that he should properly be competing in the Advanced Class, and he is hereby notified of his promotion to that group.

Data: $3\frac{1}{4} \times 4\frac{1}{4}$ " Graflex; 16.5 cm. Zeiss Tessar, F:4.5; $1/10$ th second at F:11, on E. K. Panchro-Press, in D-76, with K-2 filter; 11×14 " print on Defender Velour Black I, in D-64; projection control, Mortensen Abrasion Tone.

Second Award

Amateur Class

■Mr. Washburn has done a fine job of organizing this material into an interesting composition, by means of a carefully selected point of view. What will puzzle the reader is the optical illusion created by the three black patches in the print. Because of the extreme strength of tone these appear to be on a plane facing directly at the observer. In actuality Mr. Washburn tells us, these black areas are on receding surfaces which have been painted black. Due no doubt to our extreme ignorance of the nature and function of spillways we still can not clearly visualize the exact perspective involved here. However this appears to be about as close to a purely abstract composition as one could hope to achieve by ordinary photographic methods, excluding such things as the Photogram, of course.

Data: Leica Model D; 135 mm. Hektor; 1/10th sec. at F:22; at 11 A. M. in April; E. K. Panatomic developed for 6 mins. at 70° F. in D-76; 10x13" print on Agfa Brovira Royal, hard.



"Spillway—Boulder Dam"

*Henry Washburn
Santa Cruz, Calif.*



'Captain Jack Lloyd'

*Harry Goodwin
Washington, D. C.*

Third Award

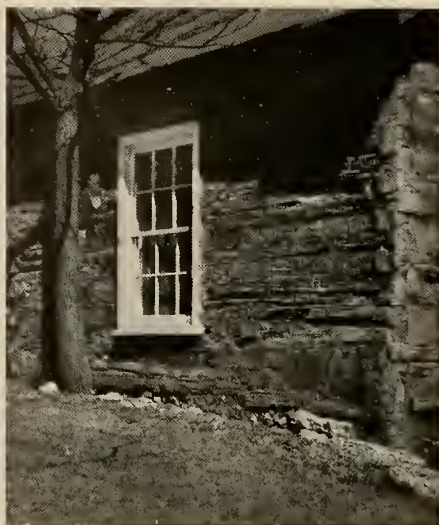
Amateur Class

■Here is one character study or costumed portrait, which has the important virtue of looking like the real thing. That is to say that the picture impresses one as being a sincere and honest portrait of the individual shown. A great many pictures of this kind fall short of being really convincing, even though the picture may have been made with a perfectly authentic specimen for a model. In most cases such failure is due to the photographer overplaying his hand either before or after the exposure. In the first place by over-direction of the model he may force an unnatural pose and engender camera consciousness. After the exposure there is always the temptation to fuss with the print or negative more than is necessary, with the result that the control exercised becomes evident.

Data: Speed Graphic; 5¼" lens; 1/5th sec. at F:6.3, on Agfa Superpan, in Defender M. Q. Borax; 3000 W Mazda light in studio; 8x10" print on E. K. P. M. C. #8, in D-72.

Fourth Award

Amateur Class



"The White Window"

A. W. Prasse
St. Louis, Mo.

■ Sometimes we suspect that many a photographer is burdened with the horrifying idea that if he is to make a good picture it must embody some soul shaking emotion, shed light on some great mystery, or elucidate some extremely important thought. In other words some photographers take themselves too seriously. We admire the courage of those who gallantly fight on under such a crushing burden, but suspect that they are making things unnecessarily tough for themselves, and missing out on a lot of fun. The fun of making some trifling little thing that is pleasant and attractive and doesn't pretend to be anything else. The athlete does not try to break a record every time he starts; the poet does not confine himself to writing epics, nor does the composer write only symphonies. Why then should the photographer work only on masterpieces? Mr. Prasse has learned that lesson. He shows us the contrast between the smooth whiteness of the window trim and the weather beaten wall. That is all, and that is enough.

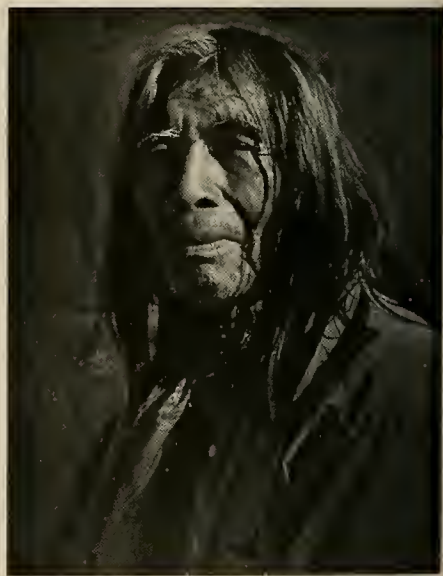
Data: 2¼x2¼" National Graflex; B. & L. Tessar; 1/30th sec. at F:11, on E. K. Verichrome, in D-76; K-1 filter; Agfa Brovira Royal, in D-72. 10x12" prints on 16x20" mounts may be obtained at the price of \$10.00 upon application to Camera Craft.

Fifth Award

Amateur Class

■ Here again we find a straight forward bit of portraiture. The most interesting point for discussion concerns the placing of the head in the picture space. Admittedly with the subject looking directly at the camera, as is the case here, the head must be in a fairly central position. As a matter of fact, however, it is now placed a little to the left of the center, with the vertical axis of the picture space running through the eye to the right of the nose, as we look at the print. Had the head been turned slightly more than is the case such a spacing would have been justified, but we hardly think it is as things are. We would therefore trim about one quarter inch from the right of the reproduction and add about one eighth inch to the left. Enough can be removed from the base to re-establish desired print proportions.

Data: 3¼x4¼" camera; Zeiss Tessar lens; print size 11x14; no other data.



"Last of The Long-Hairs (Pima)"

James R. Wilson
Phoenix, Ariz.

Monthly Competition

Scoring for Club Trophy Cups

The following won points for their clubs in the Advanced Class: Miss Louise Stinde, for The Camera Clique; Dr. Max Thorek, for the Fort Dearborn Camera Club; Rex L. Wakefield and Otto Rothschild, for the Los Angeles Camera Club; and William Hart for The Pack Rats.

The following won points for their clubs in the Amateur Class: Henry Washburn, for the Photographic Society of San Francisco; Van F. Dunlop, for the Riverside Camera Club; A. W. Prasse, for the St. Louis Camera Club; and Harry Goodwin, for the Washington Pictorialists.

The following prize winner has no club affiliations: Jas. R. Wilson.

Contributing Clubs

Aluminum Camera Club (New Kensington, Pa.)	Long Beach Camera Club (Calif.)
Amherst Camera Club (Mass.)	Los Angeles Camera Club
Baltimore Camera Club (Md.)	Oklahoma Camera Club
Calgary Photographic Society (Canada)	Pack Rats (Pasadena, Calif.)
California Camera Club (San Francisco)	Photographic Society of San Francisco
The Camera Clique (St. Louis, Mo.)	Regina Camera Club (Canada)
Camera Club of Richmond (Va.)	Riverside Pictorialists (Calif.)
Capitol City Camera Club (N. D.)	St. Louis Camera Club
East Bay Camera Club (Oakland, Calif.)	Sierra Camera Club of Sacramento (Calif.)
Fort Dearborn Camera Club	Spaulding-Moss Company Camera Club (Boston, Mass.)
Humboldt Camera Guild (Arcata, Calif.)	Washington Pictorialists (D. C.)
Huntington Park Camera Club (Calif.)	

STANDING OF THE CLUBS

Large Clubs Advanced Class		Large Clubs Amateur Class	
Fort Dearborn Camera Club.....	16	Photographic Society of San Francisco	7
Los Angeles Camera Club.....	14	Golden Gate Miniature Camera Club.....	4
Photographic Society of San Francisco	11		
Fotoklub Ljubljana	6	Small Clubs Amateur Class	
Miniature Camera Club of New York....	2	E. P. I. C. Group.....	9
		Riverside Camera Club.....	9
		Oklahoma Camera Club.....	7
		Washington Pictorialists	7
		Nassau County Camera Club.....	5
		Crockett Photographic Society.....	2
Small Clubs Advanced Class		St. Louis Camera Club.....	2
The Camera Clique.....	11	Norfolk Photographic Club.....	1
Baltimore Camera Club.....	6	San Jose Camera Club.....	1
The Pack Rats.....	2		
East Bay Camera Club.....	1		

(Continued from Page 241)

much more effective if we trim in from the right until the left knee of the workman is eliminated, and trim about one third the total width of the print from the left, and enough from the base to re-establish print proportions. The print already appears to be enlarged up to the limits which the negative will allow, so we would be content with the smaller print which remains after the suggested trimming.

Data: $2\frac{1}{4} \times 2\frac{1}{4}$ " Korelle; Zeiss Tessar F:2.8; 1/200th sec. at F:8, on E. K. S. S. Pan.; developed for 18 mins. at 70° F. in Edwal No. 12; no filter; $9\frac{1}{2} \times 13\frac{1}{2}$ " print on Agfa Brovira hard, in D-72.

Club Notes

Forthcoming Exhibitions

The Eighth Chicago International Salon of Photography. Address Mr. Alex J. Krupy, Chairman Salon Committee, Chicago Camera Club, 137 N. Wabash Ave., Chicago, Ill. Closing date June 10, 1937. Entry fee \$1.00. Limit 4 prints. July 15 to September 19, 1937.

The Marshall Field & Company First International Salon and Fourth Annual Photographic Competition. Address Marshall Field & Co., Washington, Randolph and Wabash, Chicago, Illinois. Closing date May 15, 1937.

The Fourteenth Midland Salon of Photography. Address The Hon. Salon Secretary, W. M. Robotham, c/o Railway Institute, Derby, England. Closing date May 12, 1937. Entry fee 3/6 for six prints or less, 6d for each additional print. June 12 to July 11, 1937.

42nd Annual Exhibition of the Portsmouth Camera Club. Address Hon. Exhibition Secretary, Mr. C. Cecil Davies, 26 Stubbington Ave., North End, Portsmouth, England. Closing date May 18, 1937. Entry fee 5s. Limit 6 prints. May 26 to June 23, 1937.

The Northern Photographic Exhibition. Address The Secretary, Northern Photographic Exhibition, Cartwright Memorial Hall, Bradford, Yorks, England. Closing date May 22, 1937. Entry fee 4s. June 19 to August 21, 1937.

All American Salon. Address James S. Lawshe, Salon Chairman, 604 Standard Oil Building, Los Angeles, Calif. Closing date June 1, 1937. Entry fee \$1.00. Opening date June 21, 1937.

46th Toronto Salon of Photography. Address W. H. Hammond, Salon Secretary, 2 Gould Street, Toronto, Canada. Closing date July 31, 1937. Entry fee \$1.00. Limit 4 prints. August 27 to September 11, 1937.

London Salon of Photography. Address F. J. Mortimer, Dorset House, Stamford Street, London, S. E. 1, England. Closing date September 1, 1937. September 11 to October 9, 1937.

Victorian Salon of Photography. Address C. Stuart Tompkins, Hon. Secretary, The Junction, Camberwell, Melbourne, Australia. Closing date September 11, 1937. Entry fee 5s. Limit 4 prints. October 18 to 30, 1937.

International Photographic Exhibition, Centenary of Daguerre in Budapest, Hungary. Address Modern Hungarian Photographers, Rakoczi-ut 19, Budapest, Hungary. Closing date September 20, 1937. Entry fee \$1.00. Limit 4 prints. October 1937.

The Sixth Irish Salon of Photography. Address The Hon. Secretary, The Irish Salon of Photography, 18 Morehampton Road, Dublin, Ireland. Closing date September 25, 1937. Entry fee 4/6. Limit 6 prints. October 30 to November 6, 1937.

First International Salon of The Oval Table Society. Address Joseph M. Bing, Secretary, 10 West 33rd Street, New York, N. Y. Closing date November 1, 1937. November 15 to 30, 1937.

1937 Convention of the Photographic Society of America

The 1937 convention of the Photographic Society of America will be held in Chicago October 9th and 10th, with headquarters at the Blackstone Hotel, famous "Boul Mich" hostelry.

The committee on arrangements consists of Roy Franklin Dewey, chairman; V. E. Johnson, Fred Lawrence, Lionel Heymann, James Emmett, Jr., D. Ward Pease, L. H. Longwell, Chas. D. Kaufman, Ann Pilger Dewey and Grace Kelley.

The program is being arranged by a committee with Fred Lawrence and Chas. D. Kaufman as co-chairmen.

The P. S. A. Pictorial Exhibit will be on display at the Art Institute. It will consist of some 250 prints and include both pictorial and technical sections.

It is expected that this convention in the

mid-west metropolis will attract a great many visitors, and every effort is being made to make the sessions entertaining and instructive. A considerable number of well known pictorialists have already signified their intention of attending. Invitations will be extended to both member and non-member clubs, as well as pictorialists in general, to attend the lectures.

Requests for information should be addressed to Roy Franklin Dewey, 4428 Malden Ave., Chicago, Ill.

Photographer Cures Hiccoughs

DAYTON, O.—Harry Duncan had hiccoughed for five days. A newspaper decided to publish an appeal for a home remedy. The news photographer had Duncan pose for a picture. It wasn't necessary to appeal for a remedy because the flash of the photographer's bulb stopped the hiccoughs.

Mills College Holds Eighty-Fifth Annual Exhibition of Modern Art

During the months of April and May, Mills College will hold its eighty-fifth annual exhibition of Modern Art. All the paintings and examples of graphic art come from private collections in the San Francisco Bay Region. Emphasis in the exhibition is upon contemporary creation and visitors will be well rewarded by the excellence and scope of the pictures assembled.

E.P.I.C. Pool Sponsors News Exhibits

The Epic Pool Group of San Francisco besides their own two traveling shows has sponsored the routing of several additional exhibits. These exhibits vary in size and character, some being one man shows, while others represent the collected work of various groups. The most unusual on the list is an All-Hawaiian Exhibit consisting of 38 prints by the official camera-man of the Honolulu Tourist Bureau. These have the vividness that comes from technique that is aimed at newspaper and magazine reproduction and large size prints (11 by 14), many of the portraits of Hula girls being practically life size.

Clubs interested in borrowing these shows for exhibition purposes should communicate with the Epic Pool, Room 311, 16 California Street, San Francisco, Calif.

New Zeiss Ikon Special Camera Club Exhibit

Carl Zeiss, Inc., are now considering prints for their Zeiss Ikon Special Camera Club Exhibit. The photographs selected will be shown only before camera clubs and will be returned to the owners upon completion of the travels of the show.

There is no restriction as to negative size or subject but the **print must have been enlarged from a negative exposed in a current model Zeiss Ikon camera equipped with a Carl Zeiss lens.** Prints should be sent in unmounted so that they may be mounted uniformly. Photographs will be judged for technical quality and pictorial merit and while technical and scientific subjects will be considered, pictorial subjects are preferred.

This Exhibit, which will number about 36 prints as planned, will be available to Camera Clubs after the 1st of September. Entries and reservations for the show

should be sent at once to Carl Zeiss, Inc., 485 Fifth Ave., New York, N. Y.

In addition, Carl Zeiss, Inc., will have a series of one-man shows ready for the coming season. These are also available to clubs with exhibition space and details may be had from the above address.

The Zeiss Magazine is running a monthly photographic contest with substantial awards and a complete set of rules will be sent upon request. Every six months the winners compete in a special contest for which a Grand Prize is awarded.

Inglewood Camera Club Organized

Photographic enthusiasts in Inglewood, California, have just formed a club to be known as the Inglewood Camera Club. Regular meetings will be held the first Monday of each month. At the first meeting, Robert Youngblood was elected president. Communications should be addressed to Dr. K. R. Douglas, Secretary, 102 S. Market St., Inglewood, Calif.

New Club in Grays Harbor, Washington

A new photographic club to be known as the Grays Harbor Photographic Society has just been formed with an opening membership of fifteen. The club is anxious to make contact with other amateur clubs and all communications should be sent to Alton Gribos, Secretary, 309½ South I St., Aberdeen, Wash.

Candid Camera Night in San Francisco

Every Monday night is Candid Camera Night at the Persian Room of the Hotel Sir Francis Drake. The management invites you to bring your camera and shoot anything and everything and **a camera admits you at one half cover charge.** Everything is arranged to help the camera fan, even to a step ladder for unusual angles. The cigarette girl sells flash bulbs and prizes are offered by the management for the best pictures each week. For further details call or write the Sir Francis Drake Hotel, San Francisco, Calif.

Stolen Camera

Robot Camera #C26712 L1726248 was stolen from J. E. Cheney & Staff, Inc., show window. Any information concerning this camera will be appreciated by J. E. Cheney & Staff, Inc., 301 Bridge St., Springfield, Mass.

Newark Camera Club Elects Officers

At the forty-ninth annual meeting of the Newark Camera Club, held on April 12, Charles B. Schaughency was elected President and Charles T. Pomeroy, Jr., Vice President. William L. Woodburn and Julius F. Graether were reelected Secretary and Treasurer, respectively.

Elected to the Board were Myron C. Schoonmaker, Jr., David H. Rutkin (reelected), Walter W. Shallcross, Frank L. Kaltman and Howard Levine. J. David Marks and William S. Anzer, Jr., were elected Alternates to the Board.

The club's annual dinner and entertainment will take place on the evening of April 26.

Chicago Camera Club School of Photography

The first session of the Fifth Annual Spring Term of the School of Photography was held on Tuesday evening, March 30, with an enrollment of 126 students.

Owing to lack of additional seating capacity it was unfortunately necessary to turn away more than 40 applicants for enrollment.

The instructors, all members of the Chicago Camera Club, are Messrs. Wm. C. West, W. E. Smith, Dr. George C. Poundstone, Wm. A. Kelley, Eugene Ray, Oliver J. Berg and R. S. Lund.

Details of future courses may be had by writing the Chicago Camera Club, School of Photography, 137 No. Wabash Ave., Chicago, Ill.

Prints Wanted for The Body Beautiful: Volume III

The Body Beautiful is an annual volume of photographs of the nude human body. Prints are solicited by the publishers from both amateur and professional photographers throughout the world.

There is no limitation as to type of prints, with the following exceptions:

1. Only single figures can be considered.
2. No drapery should be on or about the figure.
3. No inanimate objects such as artificial flowers, etc., should be included in the composition of the picture.
4. A minimum of retouching is preferred.

5. Both male and female figures are desired.

Conditions:

1. Prints should be carefully packed and must carry the name and address of the maker on the reverse side of each print. Prints approximating 8" x 10" are preferred.
2. Each print MUST be accompanied by a MODEL RELEASE, or by a letter stating that the photographer has such a release.
3. Prints should reach the publishers no later than July 1, 1937.
4. After the selection has been made, unused prints will be returned promptly, C.O.D., unless sufficient return postage accompanies prints.
5. The publishers will pay \$10.00 (for reproduction rights only) for each print selected.
6. The publishers cannot enter into any except routine correspondence with regard to submissions.
7. The Body Beautiful: Volume III will be published on or about October 15th, 1937.
8. Prints should be addressed to the Dodge Publishing Company, 116 East 16th Street, New York, N. Y.

Pictures for Look

LOOK, INC., 715 Locust St., Des Moines, Iowa, is a liberal but exacting market for the amateur photographer. Pictures must not only be technically good but must tell a story of interest. Unusual feature rather than news pictures are desired. The magazine is interested particularly in sets of three or more prints dramatically revealing the step-by-step development of an unusual action. Human interest and scientific subjects affecting every day life, as well as bizarre oddities, are used. The magazine has no use for ordinary portraits or purely scenic views. A study of an issue or two will improve an amateur's chances of selling pictures. Eight by ten glossy prints are preferred. A minimum of \$5.00 per print is paid. Pictures are usually purchased or rejected the day received.

Notes and Comments

\$10.00 for ROBOT Pictures

Here is a chance for owners of ROBOT cameras to cash in on their hobby, to say nothing of the possibility of country-wide publicity.

The Intercontinental Marketing Corp. of 10 East 40th Street, New York, is offering \$10 for acceptable sequence series of five pictures made with the ROBOT camera. This offer is directed to amateurs and professionals. Anyone operating a ROBOT is eligible. There are no restrictions whatsoever. The series should show interesting continuous action developments such as only the ROBOT can take and not pictures taken at "stopped" intervals.

Such negatives as are accepted are to become the property of the Intercontinental Marketing Corp. for advertising purposes, and must be accompanied by suitable releases for this purpose, where models are used. Outstanding examples of ROBOT "machine gun shooting" will be sent to coast-to-coast exhibitions.

For complete details, address the Intercontinental Marketing Corp., 10 East 40th Street, New York City.

Color Photography

The Defender Photo Supply Co., Inc., have just published a valuable twenty-four page booklet entitled, "Methods of Making Three-Color Separation Negatives," by Rowland S. Potter.

We have mentioned previously the importance of color in present day photography and commend the Defender people for making this booklet available to all.

The author, Mr. Potter, is Vice-President and Technical Director of the Defender Photo Supply Co., Inc., and naturally is well equipped to write on this interesting subject.

Professional photographers may obtain the booklet free by requesting a copy of "Methods of Making Three-Color Separation Negatives" on their letterhead and others by sending ten cents in stamps to the Defender Photo Supply Co., Inc., Rochester, N. Y.

Bee Bee Film Negative Viewer

A new photographic accessory, announced by Burleigh Brooks, Inc., is a

clever little gadget called the Bee Bee Film Negative Viewer—a device which facilitates the selection of miniature or movie frames suitable for enlargement. This little instrument has a lens at one end of a tube and a groove at the far end in which the film is inserted. While intended primarily for 35mm. film, additional grooved slides can be furnished for 16mm. and 8mm. film. It has a really good ocular lens of about 4X magnification. The focusing tube is of a polished nicked metal and the slides are of black enamel.

This little device should prove quite useful in film editing as well, as it eliminates the necessity of projecting movie film with its consequent threading and winding. Its price is surprisingly moderate.

For further information write or consult Burleigh Brooks, Inc., 127 West 42 Street, New York.

New Photo Store in San Francisco

Frederick W. Macondray will open a new photographic store in San Francisco about May 1st. The firm will be known as Cardinal Pictures and will be located at 408 Market St. The store is being completely remodeled to suit it for photographic purposes and an excellent projection room is included in the plans. Cardinal Pictures will carry a complete line of photographic equipment and supplies.

T. H. Wilton Moves to New Location

On or about April 26th, the T. H. Wilton Co. of San Francisco will move to a new ground floor location at 11 First St. This well-known firm will operate as before a wholesale and retail business, although, now in their new location, the retail business will be considerably enlarged and they offer a complete photographic service to both professional and amateur.

Coloring Supplies

Colorists who want the best in materials for their work are advised to try the Peerless Transparent Colors, manufactured by the Peerless Color Laboratories since 1885. This long experience insures your receiving products of the highest quality. Write to Dept. C-12 for descriptive literature, and full information.

Practical Method of Dry Hypersensitizing Discovered by Agfa Ansco Research Laboratory

Photographers who have wished for still greater speed than modern emulsions can provide will be interested in the new and practical method of dry hypersensitizing with mercury vapor recently published in the *Journal of the Society of Motion Picture Engineers* (vol. XXVIII, No. 2). The new method, which is the result of experiments carried out by Drs. F. Dersch and H. Duerr of the Agfa Ansco Research Laboratories in Binghamton, holds appeal to the amateur as well as professional, for the technique is extremely simple and surprisingly effective, giving from 50 to 150 percent increase in emulsion sensitivity.

To effect the hypersensitizing, wrapped or unwrapped film is merely placed in a sealed container with a small amount of liquid mercury (0.5 gram) or silver amalgam containing a high percentage of mercury. The film is allowed to stand at room temperature from 36 hours for loose, or unwrapped material to about a week for wrapped or tightly spooled film. The sensitizing action of the mercury vapor is reported to be slow and so even that no streaks or spots occur. Actual contact with the film is prevented by placing the mercury in an open glass or metal retainer or by wrapping the amalgam loosely in porous blotting paper.

Among the surprising facts revealed by the experiments, is the unusual behavior of the latent image when treated with Mercury Vapor—a discovery that may lead to a better understanding of what happens when the latent image is formed. It was found that film showed a markedly greater increase in sensitivity when hypersensitized after exposure instead of before exposure. Other interesting features of the method are that it shows no apparent effect on the gradation or the grain size of the photographic material. Further characteristics which make the method superior to usual wet-hypersensitizing treatments include the following features reported by Drs. Dersch and Duerr in their article:

"(1) The film does not have to be put through a bathing process and then dried.
(2) The mercury vapors are active also

upon tightly wound spools of film, the sensitizing effect being uniformly spread over the whole length (e.g., of a 1000-foot roll of 35mm. motion picture film). If sufficient time is available for hypersensitizing, the films need not even be removed from their original wrappers, as the mercury vapors diffuse sufficiently through the wrapping material. (3) The increase of sensitivity is general throughout the range of wavelength of light to which the film was originally sensitive. (4) The stability of the film is not permanently affected, although the increase in speed is gradually lost over a period of four weeks of aging. By a second treatment with mercury vapor the hypersensitization can be renewed in a film that has recovered from previous hypersensitizing."

Second Rolleiflex Salon

Burleigh Brooks announces that the last day for submitting prints to the Second Rolleiflex Salon of Photography is May 7th, that the Salon will be held at Rockefeller Center, New York City, unless there is advice to the contrary, and between the dates of Saturday, May 15th, and Sunday, May 23rd, inclusive.

Pictures submitted will be grouped in 4 classifications: PICTORIAL, which will include landscapes, snow scenes, marine vistas, nude studies, architecture, night photography, etc. Group "B" will include PORTRAITURE of children, adults and animals. Group "C" will be a TECHNICAL Classification including aerial, infra-red, industrial, photomicrographic and photomacrographic subjects, clinical and other scientific photography. Group "D" will consist of NEWS Pictures—that is, unposed action shots of public events, sports, human interest studies, etc.

There will be a First Prize of \$50.00 and a second prize of \$25.00 in each group—that is a total of four \$50 and four \$25 prizes . . . and an additional prize of \$100 for the best print submitted—making a grand total of \$400 in awards and enabling some fortunate entrant to obtain \$150 for his picture. For further details on the Rolleiflex Salon and Exhibition, write Burleigh Brooks, Inc., 127 West 42 Street, New York.

Herbert To Distribute Lifa-Filters

The Lifa Company of Augsburg, Germany, have earned an enviable reputation for the quality and reliability of their large line of filters. The Lifa-filters are made of pure, optically ground and spectrally tested glass and the greatest care and precaution are taken in their preparation. A great variety are available for every photographic use.

The well-known firm of Henry Herbert have been appointed as United States distributors and they will gladly supply full information and interesting literature upon request. Write, Henry Herbert, 483 Fifth Ave., New York, N. Y.

Willoughbys New Bargain List

Willoughbys announce that their new Bargain List No. 337 is now ready for distribution. Twenty-four pages of bargains on all types of photographic equipment! All cameras and lenses are guaranteed and are available on ten days trial—these terms are possible as these are exceptional buys and their condition is guaranteed by careful checking and examination in Willoughbys own Repair Shop. Besides the used equipment many items in new photographic materials are offered at special prices. Write to Willoughbys, 110 West 32nd St., New York, N. Y., for your copy of Bargain List No. 337, at once!

Zeiss Exhibition on West Coast

This year's Exhibitions of Photographs taken with ZEISS IKON Cameras have again proved to be an outstanding event in cities of the East and Middle West. Photographers from all parts of the United States have contributed pictures, and it is the high quality as well as the great variety of photographic enlargements shown which have aroused so much enthusiasm and favorable comment. The exhibition will now also be shown on the West Coast, enlarged and enriched by the work of outstanding Californian photographers. It will be in Los Angeles at the Biltmore Hotel, 1st Floor, from May 6th to 8th, inclusive; San Francisco, at the Western Women's Club Building, 609 Sutter Street, East-West Gallery, from May 12th to 15th, inclusive.

Amateurs as well as professional photographers on the Pacific Coast will, no doubt, welcome the opportunity of seeing this

remarkable collection of technically and pictorially perfect photographs.

E. Leitz, Inc., Is Moving to New Quarters

The Leica camera has made such an impression on the photographic public of America that more and more people are realizing daily the exact performance and value of the precision miniature camera.

It has ever been the service policy of E. Leitz, Inc., to give full cooperation to the Leica owner so as to enable him to derive greater joy from his camera, and the rapid increase in the number of Leica owners has necessitated an increased organization to adequately render this service. This, in turn, makes it necessary that E. Leitz, Inc., move to new and larger quarters and after March 1, 1937, E. Leitz, Inc., will be located at the Heckscher Building, 730 Fifth Avenue, New York, N. Y.

All readers of this publication are invited to visit the new quarters of E. Leitz, Inc., in which greater facilities will be had for the demonstration of the Leica camera, its accessories, and apparatus.

Univex Cine "8"

Here is an 8mm. movie outfit at an amazingly low price that is within the range of everyone's purse.

The compact camera and projector are precision built for reliable operation and strongly made for durability. They are easy to operate as well as inexpensive and will produce fine pictures that will screen up to 4½x6 feet.

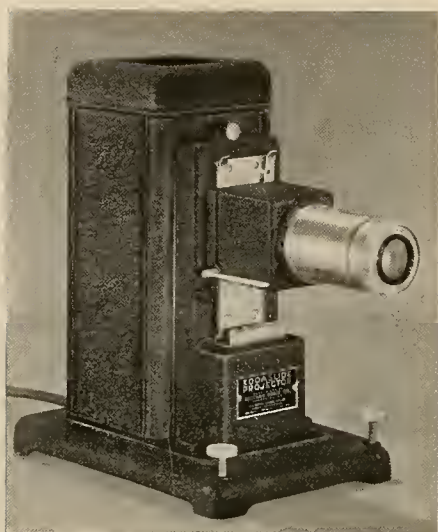
Write the Universal Camera Corporation, 32 West 23rd St., New York, N. Y., for complete details.

Bass Bargaingram

Mr. Charles Bass of the Bass Camera Co. is now preparing a new Bass Bargaingram, a now famous list of bargains that is anxiously awaited by all who have had previous experience with the sensational "buys" always to be found within its pages.

By the time this issue reaches the market this list will be ready and if you have not seen a Bargaingram be sure to get your copy of the new one early. You will find the camera you have always wanted listed at a price you can afford.

Write the Bass Camera Co., 179 W. Madison St., Chicago, Ill., for your copy now. It's free upon request.



Eastman Kodak Company Announces Kodalide Projector

A new product of the Eastman Kodak Company, the Kodalide Projector, provides owners of miniature cameras with an ideal means of projecting their "still" pictures. It is manufactured to precision standards and throws pictures of unsurpassed clarity over a large picture area from either black and white film positives or full-color Kodachrome transparencies.

For projection each picture, properly masked, is mounted in a 2 x 2 inch glass slide and are easily and automatically fed through the machine by the movement of a lever. No tilting or out of focus pictures are possible as the picture is held securely in its proper position.

Illumination is provided by a 200-watt 115 volt lamp and the lamp house is carefully insulated so that it remains safely cool on its outer surfaces. The condenser lens also contains a heat absorbing glass disc that prevents heating of the slides.

The Kodalide Projector is equipped with a $4\frac{7}{8}$ " high quality projection lens and its focal length assures plenty of room in front of the projector for spectators at the same time giving remarkable definition entirely free from distortion. Focus is easily adjusted and the lens may be easily removed for cleaning.

The Kodalide Projector is priced at

\$48.50 and a carrying case is available for \$8.00. For further details write the Eastman Kodak Company, Rochester, N.Y., or your local Eastman Kodak store.

Hirsch & Kaye Announce New Spring Line of Photographic Mountings

Hirsch & Kaye announce their new spring line of photographic mountings manufactured by the Gross Photo Supply Co. A wide variety are available and details may be had upon request.

Hirsch & Kaye offer a complete photographic service to professional and amateur photographers. Write them about your photographic requirements. Hirsch & Kaye, 239 Grant Ave., San Francisco, California.

Another Desirable Accessory

Owners of National Graflex Series II cameras will hail with enthusiasm a new Carry-All Case just announced by the Folmer Graflex Corporation. The new case enables the owner to carry with him in convenient, compact form, the camera and all the accessories required to perform any type of photographic work. It is now available at all Graflex dealers.

The National Graflex Carry-All Case, as it is called, contains seven compartments for the carrying of camera and accessories, yet it measures only $10\frac{3}{8}$ " in length, $4\frac{3}{8}$ " in width and $6\frac{1}{4}$ " in height. One compartment is for the National Graflex Series II Camera itself. The other six are the exact sizes required for carrying 12 filters and copying attachments; a 140 mm. f.6.3 accessory telephoto lens; Weston exposure meter; collapsible sun shade; a reserve supply of film; and accessory self-timer, direct light finder and cable release.

Made of black sole leather and plush lined throughout to protect the equipment from chafing or injury, the Carry-All Case is sure to meet with enthusiastic acceptance by the thousands of owners of the National Graflex Series II Camera. By enabling these owners to take all necessary equipment with them on field trips, picture-taking expeditions, hikes, etc., it fulfills a long-felt need.

It comes complete with both carrying handle and shoulder straps and lock and key.

Korelle Reflex

Burke & James, Inc., have found such a warm reception for the Korelle Reflex, among both beginners and advanced workers, that they are featuring it in their Spring Showing.

Korelle Reflex is a visual focusing miniature camera of the finest precision construction, with interchangeable lenses. The camera is the true reflecting type, showing an image on the ground glass formed by the objective lens, the same lens that takes the picture. The focusing hood with its built-in magnifier is self erecting and instantly ready for picture making. Using standard No. 120 roll film, Korelle Reflex, produces 12 negatives, size $2\frac{1}{4} \times 2\frac{1}{4}$ inches, on each eight exposure roll. The camera has a high speed focal plane shutter with a wide range of exposure speeds from $1/25$ th to $1/500$ th second and bulb, and an interesting feature is the coupling of the shutter winding with the film wind, thus making it automatic and eliminating the possibility of double exposure.

There are many other features on this remarkable camera and the qualities are best proven by the fact that Burke & James, Inc., due to the increasing demand for Korelle Reflex, are now taking practically the entire output of the European factory.

For further details, write Burke & James, Inc., 223 W. Madison St., Chicago, Ill.

Practical Color Photography

Bassani Processes, Inc., American agents for Finlay Colour (London) Ltd., are distributing a booklet entitled "Practical Color Photography With the Finlay Natural Color Process." It describes the Finlay process and points the way to progress in this fascinating field.

The Finlay process has simplified the problems of color work until it is within the range of every photographer and with color the greatest interest of forward looking camera enthusiasts it behooves everyone to understand and work in this important field.

You may obtain the booklet for 20c from your dealer or Bassani Processes, Inc., 305 East 45th St., New York, N. Y.

Amateur Photographers to Get 10 Dollars For Good Ford Truck Shots

Here's a new opportunity for amateur photographers to cash in on their hobby. The Ford Motor Company has issued an invitation to amateurs to send in action pictures of 1937 Ford V-8 trucks and offers to pay ten dollars for each print accepted.

Amateurs in all sections of the country are expected to respond. Only pictures showing trucks at work, making deliveries, being loaded or unloaded or performing unusual and interesting jobs are wanted.

The announcement states that only sharp focus, fine grain, glossy prints with good detail will be purchased. The 8×10 size is preferred although 5×7 prints will be considered.

Amateurs are instructed to include with each print submitted an advertising release signed by all persons appearing in the photograph, as well as from the owner of each truck photographed. Copies of a release form may be obtained from the Ford Motor Company, Dearborn, Mich.

A list of suggestions has been compiled to aid amateurs in getting the best results. These are as follows:

Radiator and name plate of trucks should be in plain view and should not be blocked out by persons or objects between camera and the truck. Persons appearing in the pictures should not be looking at the camera.

Since the human touch is necessary to make an action picture, the presence of at least one person is required in each photograph. Worm's eye views and trick shots will be considered, but the company desires realistic illustrations.

Although good backgrounds are highly desirable, they should not dominate the scene. Truck engines should be turned off during long exposures to prevent blurred negatives.

Amateurs planning to send in prints are directed to get in touch with a local Ford dealer for the purpose of obtaining the names of owners of 1937 trucks and to get themselves thoroughly acquainted with the appearance of new models. Prints should be forwarded to the Ford Motor Company, Dearborn, Mich.

Our Book Shelves

Photography by Artificial Light, by Marcel Natkin. Published by Fountain Press, London, England. American Agents, Camera Craft Publishing Co., San Francisco. 80 pages, 5¼ x 8", paper bound, price \$1.25.

The full title of this volume is **Photography by Artificial Light at Home, in the street, at the Theatre**, and is in itself a brief summary of the material the book contains. The book is concerned primarily with the use of the photo flood and photo flash lamps and Mr. Natkin presents examples and lighting diagrams for home portraiture with sets of one, two and three photo floods as well as a large variety of other uses such as silouettes, groups, and still life subjects.

The use of the photo flash lamp is also carefully presented and examples are given of photography using the ordinary illumination of the home.

The section on photography in the street or night photography is simply and clearly explained. Many ideas for night shots and the method by which they may be obtained are presented; by the use of ordinary street lighting as well as the photo flash lamp. As the title indicates the book also deals with theatre photography, which has proven itself such a fascinating sideline to many photographers.

The lighting diagrams are unusually complete as they offer beside the usual floor plan perspective drawings of the lighting set up. This book is exceptionally fine for the beginner in photography, who is taking up the subjects as outlined above, because of its clear, precise instructions that are easily absorbed by the struggling amateur.

Practical Amateur Photography, by William S. Davis. The New \$1.00 Edition. Published by the Garden City Publishing Co., Inc., of Garden City, N. Y. 264 pages, 5½ x 8", price \$1.00, cloth bound.

Here is an exceptional value for the beginner in photography, the new \$1.00 edition of Mr. Davis' excellent book. The original edition sold for \$2.25 and was well worth the price and now the same book

has been revised and brought up-to-date with pertinent new sections added and it sells for only \$1.00!

The aim of this book, in the author's own words is, "to provide a general guidebook for amateur photographers, in which is described in proper sequence each step in the evolution of a finished photograph; the theoretical as well as the practical working details being given, and to present this information in as non-technical language as the nature of the subject permits."

The author has ably attained his aim and the new edition of 264 pages is no miniature of the first volume but just as large and as thoroughly complete. The Garden City Publishing Co. has done photography a "good turn" by making this book available at such a price.

Amateur Movies & How to Make Them, by Alex Strasser. Published by Studio Publications, Inc., of London and New York. 80 pages, 7½ x 10", price \$3.50, cloth bound.

The usual impulse of the cinemaniac, having just secured his first camera, is to "pan" the whole world, beginning with the surrounding country and the family and branching out from there, without plan or exception. Commendable as such enthusiasm is, the results, from the recognizable pictures of the heir apparent to the dizzying views of the local mountains, are not. The camera enthusiast is no less shocked than his friends to find that the film has failed to realize his fond but hurried dreams.

The beginner could avoid the depths of despair as well as the appalling waste of film if he would first take the trouble to learn the rudiments of his chosen hobby.

This book is designed to save the beginner's film and peace of mind and it proceeds on the general outline of what, as the author says, the amateur "can" and "should" do:

"1. He can find out something about the technical side of cinematography.

"2. Then make himself familiar with the art principles of film work and . . .

"3. Finally, he can choose one or two special fields in which his personal tastes

and talents may appear at their best so that his productions will not look like "another amateur effort" but will have something of his own personality in them."

Mr. Strasser, a man of great experience and reputation in his field, has followed this excellent outline to best advantage. He explains clearly, in careful detail, the whole of the cinematographic process, in so far as it affects the beginner, and the abundant use of the exceptional illustrations make the text doubly meaningful.

This is a new book in the Studio "How To Do It" Series of which photographers will remember "Making a Photograph" by Ansel Adams for its beautiful illustrations and fine contents. The same style and typography are used in this book and beginners will find it the answer to their most urgent need.

Perfect Print Control, by Laurence Dutton. Published by the Galleon Press of New York. 151 pages, 6 x 9", cloth bound, price \$2.50.

The author of this volume is concerned with practical methods of making high quality prints, consistently and without waste of materials. Mr. Dutton points out that though everything favors the worker in getting the picture on the negative, due to the widespread knowledge of film speeds, the use of accurate exposure meters and the latitude allowed by modern film; there is no such latitude or accurate checks available in printing. Though the author could not put latitude in printing papers which are not there he can and does present an accurate system of checks designed to eliminate errors.

Besides offering his printing system, Mr. Dutton, brings a mass of material and useful data previously unavailable to photographers. He gives a complete analysis of printing paper characteristics, a valuable formulary, and thorough-going explanations of printing papers, enlargers, and photo-meters.

The author really presents his readers with the results of his own long, painstaking research, and any photographer wanting to know the why and wherefor of his hobby or business will need this book.

Night Photography, by Dr. Walther Heering. Published by Dr. Walther Heering Verlag, Germany. American Agents, Burleigh Brooks, of New York. 54 pages, 6 x 8½", paper bound, price \$1.00.

The writing of Dr. Heering are well known to photographers, for as author and publisher he has presented the "Rolleiflex Book" and the "Golden Book of Rolleiflex" among others.

This new book equals in contents and appearance the high standard set by his other volumes.

This book is divided into five sections covering, in turn, the problems of time exposure, snapshots at night, fireworks, flashlight photos at night, and a discussion of infra-red photography which allows pseudo-night effects in the day-time.

The author deals most thoroughly with Time Exposure for he says that this most fascinating branch of night photography is within the range of the most modest camera, whereas the more spectacular instantaneous work requires a wide aperture lens and is limited in scope. The amazing possibilities of this subject are clearly shown by the many illustrations, superbly printed.

Photography—1839-1937, Edited by Beaumont Newhall. Published by Museum of Modern Art, New York. Price \$3.00, cloth bound.

This is a volume, in our opinion, which every serious photographer should have in his library. That it is a catalogue of the marvelous exhibition of photography arranged by the Museum of Modern Art is of small importance when the volume is considered as a book.

The review of photography from its beginning to the present time as written by Beaumont Newhall and the ninety-five plates are of lasting value and worth.

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"The Wisdom of Years"

Dr. Julian Smith, F.R.P.S.

1st San Francisco International Invitational Salon

Success Story

George Allen Young

San Francisco Invitational Salon of International Photography

THIS exhibition is worth talking about for two reasons. First, because it is a darn good show. Second, because the organization of the salon is unique in several respects. Any group with ambitions to put on a major exhibition is immediately faced with certain cold, hard, and rather discouraging facts. It becomes apparent that the conduct of an exhibition entails a whale of a lot of honest to goodness hard work. It is evidence that there are a lot of exhibitions competing for the relatively small amount of good work available. It is realized that for a variety of reasons, many of the finest photographers seldom submit to salons.

What to Do?

First, about three years ago, the committee wrote to the active heads of most of the major exhibitions in this country, seeking authoritative advice. The responses were uniformly discouraging and rightly so, for the difficulties were certainly formidable. With this advice in hand the committee devoted many sessions to careful planning and discussion. It was finally decided that the best possibilities for success were offered by a strictly invitational exhibition, especially one where the number of invitations sent out would be drastically limited.

The invitational exhibition is usually criticized on two points. It is held that the invitational salon discourages the younger photographers since they cannot hope to be invited until they have obtained a reputation. It is also held that exhibitors often do not send their best prints to invitational shows, either because they are assured of a hanging regardless of the quality of the print sent, or because the photographer himself may not be a good judge of his own work.

The committee considered that the first point was without weight, since there are certainly more than enough shows in existence to give the



"Lettuce Field"

Edward Weston, United States

1st San Francisco International Invitational Salon

beginner all the encouragement he requires. Some validity was accorded the second point. It was felt, however, that the difficulties arising from this tendency would be largely overcome if invitations were sent only to photographers of established high ability who were actively engaged in producing new work. The results obtained appear to support this conclusion, since there are surprisingly few weak spots in the show.

A much more real difficulty appears when one faces the problem of selecting those to be invited to contribute. It is impossible for any group to be sufficiently acquainted with photographers throughout the world to make an intelligent selection for an international salon.

It was to meet this difficulty that the committee devised its principal innovation. An outstanding photographic authority was selected in each of the countries from which prints were to be solicited, and he was invited to become the representative of the exhibition for his country. The prompt and virtually unanimous response which was received from these busy gentlemen from all parts of the world, speaks volumes for the fraternal spirit which the love of photography engenders.

The number of prints which would be sought from each country was decided in advance, and a tentative list of invitees for the country in which he resides was sent to each representative. He was urged to add to and detract from the list until, in his opinion, it contained the names of



"Paul Robeson, As Emperor Jones"

Edward Steichen, United States

1st San Francisco International Invitational Salon

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"Breaking Wave"

G. L. Hawkins, F.R.P.S., England

1st San Francisco International Invitational Salon

those most worthy to represent his country. The lists were then returned to the United States and an invitation made out for each individual to be invited. The invitations were then mailed to each representative who enclosed a personal note with each invitation and mailed them in his own country. The invitations directed the exhibitor to send his print to the salon's representative in his own country. It is evident that every effort was made to make things as easy as possible for the contributor. Each representative then mailed the group of prints from his country in a single package.

As will be evident to the reader, it is impossible to give too much credit for the success of this exhibition to the Salon's representatives in the various countries. The conscientious and competent manner in which they each handled a difficult task, involving considerable responsibility, is gratifying in the extreme. One can truly say that these men work unselfishly for the advancement of photography. The Salon's representatives are:

Australia and New Zealand—Dr. Julian Smith, F.R.P.S., East Melbourne.

Austria—Mr. Josef Gottschammel, Vienna.

Belgium—Mr. Herman Burton. Brussels.

Czechoslovakia—Ing. Jaroslav Krupka, Praha.

Denmark—Mr. H. B. J. Cramer, Copenhagen.



"Gute Freunde"

Andor Angyalfi, Hungary

1st San Francisco International Invitational Salon

England—Mr. Edgar M. Firth, F.R.P.S., Worcester.
France—Mr. Charles Peignot, Paris.
Germany—Mr. Bruno Schultz, Berlin.
Holland—Messrs. Adrian & Dick Boer, Bloemendal.
Hungary—Mr. Erno Vadas, Budapest.
India—Mr. F. R. Ratnagar, F.R.P.S., Bombay.
Italy—Mr. Achille Bologna, Torino.
Jugoslavia—Mr. Srecko Grom, Ljubljana.
Norway—Mr. Torfinn Michaelsen, A.R.P.S., Oslo.
Poland—Mr. Jan Bulhak, Wilno.
Roumania—Dr. Sp. Constantinescu, Bucuresti.
Russia—Miss Helen Black, New York City.
Switzerland—Mr. Adolph Herz, Lucerne.

Seventy-five invitations were mailed to Americans. These names were selected by the Salon Committee consisting of James C. Hobart, Chairman, Ansel Adams, P. Douglas Anderson, F.R.P.S., Sigismund Blumann, F.R.P.S., W. E. Dassonville, John Paul Edwards, G. H. S. Harding, and George Allen Young.

The final list of names were arrived at by a process of elimination. Exhibition records were considered of secondary importance. In fact, a deliberate attempt was made to include photographers of known ability who seldom if ever exhibit. It was also required that the photographers be actively working at the present time. The limiting of the invitations to seventy-five made the committee's task a very difficult one, for it forced the most drastic elimination.

Above we have described the manner in which one committee met the difficulties involved in conducting an invitational exhibition, except for the point about hard work. That aspect of the problem was taken over almost single handed by committee chairman, James C. Hobart, who is a hog for punishment and an efficient administrator as well. In short, the ideal salon committee chairman.

The Exhibition

We feel quite safe in saying that the salon has attained each of its three major objectives:

1. A show of high and fairly uniform quality.
2. A thoroughly representative group from each country invited.
3. Prints were obtained from a large number of outstanding photographers who seldom exhibit.

A further element of interest has been added to the exhibition by hanging each national group as a separate unit. In some cases this reveals quite clearly, strongly pronounced national tendencies. Such tendencies are most evident in the Hungarian, Czechoslovakian, English, and Australian-New Zealand groups. They are least evident in the American group which is, as would be expected, a widely diversified collection.



"Nude"

Bruno Schultz, Germany

1st San Francisco International Invitational Salon



"Portrait"

Man Ray, France

1st San Francisco International Invitational Salon



"A Gothic Picture"

F. Zielgler, Holland

1st San Francisco International Invitational Salon

Because of the fact that certain groups so clearly represent a particular school of photography this exhibition presents the difference between the various schools in a much clearer fashion than is usually the case.

Obviously there is much photography that cannot be definitely classified as belonging to any one school. However, in so far as such classifications are valid, it seems to the writer that three distinct schools can be clearly differentiated.

These are commonly referred to as the Romantic School, the School of Pure, or Straight Photography, and (a less commonly accepted term), The School of Realism.

The Romantic School places great emphasis upon mood and emotion, and seeks for the most part subjects which may be termed beautiful, in the sense in which that word is most often used. That is, subjects which are pretty, charming, attractive; subjects which arouse the quieter emotions; subjects which may be treated in the grand manner.

England, Australia and the United States contributes the finest examples of photography in the romantic vein. Our frontispiece by Dr. Julian Smith, F.R.P.S., affords a splendid example. In the opinion of the writer, this is easily one of the finest things in a fine show. "Breaking Wave," by G. L. Hawkins, F.R.P.S., is another very lovely thing in the same spirit. There are several other fine pictures which we should like to mention but it seems best to cite only those which are reproduced herewith.

The School of Pure Photography is perhaps most ably represented by the rather loosely allied, Group F:64, on the Pacific Coast, now practically inactive as an organization. This movement is to a great degree a reaction against the over-sentimentality of much of the run-of-the-mill photography, and a protest against hand work and control printing processes which are considered out of keeping with the character of the medium. In their determination to eschew sentiment, the group chooses subject matter that is intellectually interesting for its beauty of texture and form, but which is almost devoid of emotional qualities. A fine example of the work of this school is provided by its foremost exponent. We refer to Edward Weston's picture of a lettuce field. There are indications that many working in this vein are seeking to broaden the scope of their subject matter, so we may look for some interesting developments as a result of that search.

The third school which we have designated as Realistic, seems to the writer to strike something of a happy medium between the other two groups. This in the sense that it takes something from each to create a distinct field of its own. Only straight photographic processes with glossy prints are used, as in Pure Photography, but the subject matter of this group has much more human appeal. For the most part it is light and even trivial in content, but always extremely entertaining. For examples, refer to the cover picture and to "Gute Freunde" by Andor Angyalfi.

The influence of the miniature camera is very evident here for the great majority of the pictures are unposed. This kind of photography has reached its highest development in the central European countries. Hungary and Czechoslovakia in particular have sent splendid groups to



"Sang des Winters"

Wilhelm Angerer, Austria

1st San Francisco International Invitational Salon

this exhibition which are made up almost entirely of such work. To a lesser extent this same quality is to be found in the German, Romanian, Austrian, Yugoslavian, and American groups.

It is not fair to say that any one group stands out as being definitely above all the others. We do feel, however, that England and Australia lead all the others for work in the romantic manner. That Hungary and Czechoslovakia present the finest work of the type which we have called

realistic. That the United States and Austria present the best groups made up of a variety of work.

Due to lack of space we have been forced to confine our discussion somewhat unfairly to a few of the largest groups in the show. Several smaller countries are represented by groups which make up in quality what they may lack in quantity. The Salon Committee was naturally forced to limit the number of prints accepted in accordance with the population of the various countries. All told, the exhibition contains 354 prints from twenty-two countries.

In closing this article, it occurs to the writer that the manner in which the first part is written might lead some to think that it is in the nature of an official report from the Salon Committee. Such is not the case. The writer speaks only for himself and what has been said does not necessarily reflect the opinions of any other members of the committee.

Postscript

A preview of the exhibition was held on Friday night, May 14th, at which Dr. D. J. Ruzicka, F.R.P.S., and Wm. A. Alcock, F.R.P.S., both of New York, and internationally famous as photographers, were honored guests. Said Dr. Ruzicka of the exhibition: "This is the best show I have yet seen. There is not a single print in the whole exhibition that I would like to see excluded, while the finest prints in the show reach a peak of perfection that is seldom attained. Czechoslovakia, Jugoslavia, Hungary, and Italy have especially fine groups. The American group is also fine, but this exhibition shows that Americans must look to their laurels if they are to keep pace with the rapid advances which are taking place in Europe, and it is evident that Americans can learn much by a careful study of the best European photography."

John Paul Edwards was also a guest of honor at the opening night. Mr. Edwards has traveled widely, has served on the jury of most of the important photographic exhibitions throughout the world and consequently speaks with authority. "The dignity of the gallery and the good taste displayed in arranging the prints on the walls, combine to make this the most attractively presented show which I have ever seen," said Mr. Edwards. "The foreign exhibitions compare very favorably with the best foreign work which has so far been shown in America, and the show as a whole is definitely the finest which has ever hung in San Francisco. Because the prints are hung in national groups, the observer has his first real opportunity to directly compare the work of various countries. It is interesting to see how clearly the national personality is reflected in each group. For example, it is most illuminating to compare the vigor of the Czechoslovakian or Hungarian prints with the quiet beauty of those from England or Australia. I am also impressed with the world-wide influence of the modern movement in photography, as revealed in this exhibition."

A fourth honored guest was Mr. P. Douglas Anderson, F.R.P.S., instructor in photography and Honorary President of the Photographic Society of San Francisco. Said Mr. Anderson: "Without question the finest collection of pictures that has ever been seen in a single exhibition. The presentation of the prints leaves nothing to be desired, while the plan of hanging them in national units adds much to the inspirational and educational value of the show."



"Licht und Schatten"

Theo Eschen, Germany

1st San Francisco International Invitational Salon

Understanding Exposure Meters

Harry Champlin

ELECTRIC exposure meters are probably one of the most misused items of equipment in the modern miniature photographers kit. The correct use of one of these exposure meters, or photometers, is just as important to perfect results as is the possession of one of these marvelous instruments. So many people have them and use them and still continue to make roll after roll of negatives with extreme variations in densities that it might be worth while to explain some things about these meters that are not generally known.

A meter should be first set for the emulsion speed of the film in use. The emulsion speed may be translated into Weston, Scheiner, DIN, or any other rating, and this is of little importance. The truly important thing to know is the emulsion speed rating of the film you are using in combination with the developer you are using. For all practical purposes, we can use the rating given by the manufacturer of the meter and then either increase or decrease that rating in accordance with the emulsion speed of the developer in use. For example, if you are using the Eastman Formula D-76, you can set the meter at the rating given by the meter manufacturer, while if you are using the Formula Sease No. 3, you will have to set the meter at one-third of the rating given by the manufacturer.

You will note that the emulsion speed ratings differ according to whether the meter is to be used in daylight or artificial light. The Mazda light rating is usually from one-third to one-half lower than the daylight rating. This differentiation is necessitated by the fact that the sensitivity of any film varies in accordance with the color composition of the light falling upon the subject being photographed. Film is far more sensitive to daylight than to Mazda light because daylight contains a high percentage of blue and ultra violet light, lights to which all films are highly sensitive. Mazda light, on the other hand, is made up largely of yellow and red light. All films are much less sensitive to these colors than they are to blue, invisible blue and ultra violet.

It is true that panchromatic films are proportionately more sensitive to yellow and red than are orthochromatic films, and yet these films also have a high sensitivity to the blue end of the spectrum.

From this it will be seen that the actual emulsion speed of any film

lack of shadow detail. Underexposure is incorrect, regardless of the size of the camera used.

For these reasons, we should use any photometer of the photoelectric cell type in the following manner: Set the emulsion speed rating to the highest rating recommended for use with that emulsion in noonday light only, and after two o'clock, decrease the emulsion speed slightly. For example—a Weston meter used with DuPont Super film, which is to be developed in Champlin No. 15, should be set at 64 Weston for exposures in noon daylight only. Before ten o'clock and after two o'clock, the emulsion speed of the meter should be changed to 40 Weston. Before nine o'clock and after four o'clock, the emulsion speed of the meter should be decreased to 32 Weston.

A series of negatives exposed at these ratings and developed in a high-speed emulsion developer, such as Champlin No. 15, will all print on the same kind of paper and will all require approximately the same printing time. To apply these recommendations to any film, developer or speed-rating system, the photographer should decrease the emulsion speed rating by one-third before ten and after two o'clock, and by one-half before nine and after four o'clock.

It may be well to repeat here that this variation is due to the unbalanced sensitivities of present-day film emulsions and not to the electric eye of a good exposure meter. Film manufacturers are all striving to produce a film emulsion with the same sensitivity to the spectrum as the human eye, but to date this has not been accomplished.

Too many photographers use their meters without any thought whatsoever of the color of the light falling upon the subject they are photographing, and this fact accounts for the great variations in density in negatives throughout the day, even though the photographers religiously follow the exposures indicated by the meter.

The second cause for lack of refinement and proper shadow detail in the negatives, is the manner in which the meter is held during the reading. So many photographers follow the instructions in the meter manuals and tilt the meter down at a thirty degree angle or hold their hand or their hat over it, and give no thought at all to the subject being photographed. The proper way to hold a meter should depend entirely upon the subject being photographed and the distance the photographer is from it. All photography is purely a recording of light and shade, and the most perfect pictures are made from negatives with a long delicate separation of tones, starting with white and ending with black. The meter should be held in such a manner as to take in a balance of highlight and shade that will give a reading half way between the highest light and the deepest shade. Therein lies the great difficulty.

All scenes must have highlights and shadows. Should the highlights predominate, the meter will be greatly influenced by them, and the reading indicated will not allow for the shadows. The meter is naturally more readily affected by strong highlights than it is by deep shadows and it should always be held so as to exclude all glaring highlights which are not to be a part of the picture. For example, if the scene to be photographed is composed of nearby objects in shade and beyond these near



Individual readings of the various parts of this subject gave 1000 c.f. for the wall, 20 c.f. for the windows, and 8 c.f. for the shaded entrance. A general reading from opposite side of street gave 650 c.f. This would call for an exposure of 1/600 sec. at F:8, while the actual exposure based on an average was 1/125 sec. at F:8.

objects there is strong sunlight, the meter should be held in such a manner as to exclude all light from the sunlit area. Should the meter be held carelessly so that the light from the sunlit area falls upon it, there will be a decided over-reading which results in under-exposure and the shadow detail will be materially affected. In photographing people the meter should be held at about one foot from the shadow side of the subject and no light from the highlighted side should be permitted to act upon it. In this type of photography, the people being photographed are the main subject of interest and nothing else matters. In photographing scenes at a distance, the meter should be held up so that some of the light from the sky will be allowed to reach the lens of the meter. This will result in a much higher reading which will be correct for the subject being photographed. The higher reading will eliminate the over-exposure of the distance and will show a much better tone value of all the objects in the distance. The immediate foreground will suffer from under-exposure, but in this particular instance there is no interest in the foreground.

The perfect and most satisfactory method of reading a meter is one in which the highlight is measured and used as an indication of the correct exposure. In actual practice this method is as follows. A reading is made with a Weston Meter in the highlight of the scene to be photographed. The scale of the meter is then set so that "O" on the dial is placed at the figure corresponding to the needle reading of the meter. Any tone between the "O" and "U" upon the scale will be recorded upon the film. The effect of this reading is to place the arrow of the meter in the center of the range of tones which the film is to record. This method of reading is truly



Rod La Roque

This is a subject which does not permit close-up measurement of the shadows. When the meter is used from the camera position on such a subject it must be tilted sharply downward to avoid the brilliant light from the sea beyond. E. K. Super X exposed at Weston 64, developed in Champlin #15.

scientific and will assure the user of the meter of a perfect range of tones in every negative made by it. This method of reading is more exacting than a general reading taken in the ordinary manner, although the two readings will be actually very similar. To show this a little more clearly there is included herewith a photograph of a portion of a building. This building is cream colored and receives the full rays of the sun. There are shop windows under awnings and an entrance to the building which do not receive any sunlight. A reading of this building made in the ordinary manner from the opposite side of the street would indicate a light intensity of 650 candle feet. If we were to place the arrow of the meter on this figure we would grossly under-expose the shop windows and entrance corridor. In this particular case there is a predominance of strong highlight and this predominance naturally affected the meter reading. A highlight reading taken from a short distance will indicate a light intensity of 1,000 candle feet and by setting the "O" of the meter upon 1,000 an exposure will be indicated which will give full detail in the shop windows beneath the awnings and in the darkened entrance corridor. This is not over-exposing. It is simply placing the exposure in the center of the tonal range desired in the final print. In using this method of reading for distance shots the meter should be held up so that a reading of the sky is made. The sky would naturally represent the highlight and the "O" of the meter set upon the figure indicated will give a correct reading.

In outdoor portraiture, the reading is made of the highlighted side of the face of the subject, or if they are wearing white and that white is in direct sunlight, the reading should be made there. Such a reading will give full detail in the sunlit white cloth and also in the deepest shadows.

Meters other than the Weston which do not have this method of calculation can be used by simply making a reading of the highest light and the deepest shade. A figure half way between these two extremes will be the correct exposure. This method is a trifle longer, but is just as accurate. If all of the negatives in several rolls of film are made in this manner and the films are all developed at the standard time recommended for the film in use, all negatives will have exactly the same density and will require exactly the same time for printing upon the same paper.

A little care in meter reading with two or three rolls of film will show exactly where to point the meter when taking a reading. The photographer will soon learn that the only way to take a reading is to have the exposure set in exactly the middle of the tone scale of the scene to be photographed.

The photographer should learn how to use his meter correctly and he will know immediately when he has acquired this knowledge because his negatives will all be of the same density and will all have the same printing quality.

Art Principles In Photography

Walter Bunnell

LET us investigate a certain trend in photography—the trend which, evident since the time of D. O. Hill in 1844, leads to the production of pictures conforming with the great tradition of art that has swept forward since the time of the painter Giotto in 1300.

It will not be necessary to compare the photograph with the painting, any more than it is necessary or customary to compare the painting with sculpture or mosaic. But the element which is common to painting and the selected type of photography will be examined and its mien under each guise given consideration. This element is art—as a craft and a philosophy.

The value of this study lies in the orientation it will give to certain workers in photography. For one thing, before a worker can produce something which embodies, even partly, the ideas of a tradition, it is necessary for him to know what that tradition is. This does not mean that the artist without art education is impossible. It does mean that such an artist is isolated and therefore denied much in the way of reinforcement that comes with making a common cause.



"Flood Refugee"

Margaret Bourke-White, United States

1st San Francisco International Invitational Salon

Similarly, after the negative has been made, the procedure may be that of the artist. Selection of a part, and not the literal all, of the negative for printing is at once practicable. In addition to his, it is possible to emphasize, subdue or delete any desired portion (line or mass) of what is selected for the actual printing. Several methods for this have been known for a number of years, and one was recently described by William Mortensen. The latter technique is used in projection printing. An opaque board with an aperture in it is placed to intercept the beam of light from the enlarger to the printing easel. By moving this board up and down, or varying the size of the aperture, the beam of light to the printing paper is varied in size and intensity, and the operator is able to paint with light while using the image projected from the negative as a thrice trustworthy guide.

From the above, we perceive that the worker with a camera can do much in the way of art tactic that a worker in any other medium can do. In fact, there are powers granted to him that are not granted to others—mostly in the way of being a dealer in realism—but we will not be further occupied with these considerations until a later paragraph. The photographer can be an artist. If he is an artist, it is not good for him to be isolated from the great main body of his doctrine and his craft.

It must be recognized that at present many photographs are produced which, while sincere, give telltale evidence that art tradition is practically unknown to the photographer. It is not a case of a deliberate swerving away from the beaten path of the tradition, such as characterizes much modern painting. These photographs intend to be art products but have much of their effect nullified because they are not in the tradition—they reveal their makers' ignorance of the great body of ideals and ideas which have accumulated through the centuries and constitute Art.

It may be said that photography has a unique regimen which is independent of any discipline that can be imposed by traditional art. The subscribers to "straight photography" often maintain such an attitude. This is a natural corollary to the practices they follow in the craft. Analogously, if there should be a painter who maintained that the hand should paint, without modification, what the eye sees (something no painter ever did maintain), a critic in the field of painting would readily understand why such a worker would not care to participate in the practices of traditional art. Why the reluctance to participate? Because art in the tradition is creation. Architecture, from which all other arts draw sustenance, is practically pure creation. And if there is to be creation, if nature is to be transliterated in the representation, not merely transferred, there must be modification, whether it be in the record made by the camera or by the eye.

It cannot be maintained that photography has any inherent characteristics alien to traditional art which force it to continue a separate course, abstaining from creativeness. In other words, modification of the camera record is not only possible, it is practicable and profitable—and esthetically worthwhile.

The traditional creative arts all turn to a common source for their regimen. If it is advisable for photography to remain aloof from these



"Dry Bread"

Carola Rust, United States

1st San Francisco International Invitational Salon

arts and from this common source—if photography really is to be a separate entity—then it must be shown that there is no common ground of technique, ideas or ideals. If there is such a ground, and photography still abstains, refusing the vast resources to which it might have access, then it is isolated to that extent. We need no tenuous thread to carry us from this premise to the realization that a picture, made by photography or any other means, to be effective must employ certain aids such as composition, breadth, mood chiaroscuro, etc. We conclude that, if the photographer wishes it to be so, his photography may enter and be included in traditional Art.

It is the purpose now to set down some of the concepts of this great body of special human knowledge and field of special human endeavor.

First comes classification. In painting, for instance, it is usually considered that a work should present certain characteristics which enable a critic or spectator to place it in one of the following divisions of painting:

Portrait

Genre

Landscape (or "View")

It is possible that a painting may present characteristics pertaining to two or even all three of the groups. But it will never be a hybrid, and if it does pertain to more than one group it will show distinct consciousness of this partitioning of its effect. How? Through use of the principle of subordination. For a notable example we may consider "The Night Watch" of Rembrandt. It is portraiture, and also there is a good deal of genre about it. The genre is definitely subordinated to the portraiture. Traditional art accepts this picture as great. The partitioning of effect is achieved deliberately by the artist and is an indication that he is sensitive to the tradition to which he contributes when he paints the picture. He consents to classify his work.

The next point is to recognize that traditional art has built up a distinction between what it terms academicism and what we may term initiative on the part of the artist.

In other days, the academies where exhibitions were held, constituted themselves the arbiters of art. A painting was judged not on its merits but on its likeness to what had been previously exhibited in these selfsame academies. Thus the origin of the term academicism. It denotes an art that is put upon an art.

Contrary to the academic artist, we have the worker who sees his subject not in the dim light of what some other artist has done to it, but in the brighter light of his own vision of it as it exists in nature. Thus each painting comes, not primarily to the exhibit, but to the spectator fresh from nature and the artist's communion with nature. This is the way it should be, for it is indeed customary to behold the purpose of art as the re-presentation of nature, and each artificial veil that is interposed spoils the effect to that extent.

As a corollary to this brand of initiative on the part of the artist, we find that his vision functions in an aspect more intimate yet. This has to do with the passage through the appearances of nature to its essences.

One of the greater glories of art, source of the keenest delight to the spectator, is this power it has of displaying for us something of the ding-an-sich. Hence, traditional art recognizes this function; and we must label it here as one of our fundamental concepts.

There is still another characteristic of art which it is important to consider. This is called amplitude—the fullness of the work: in conception, execution and finish. Amplitude in a work of art is in part a function of the energy the artist has available to put into the production of the work. Amplitude may also be regarded as synonymous with expertness. It implies that the thing is well done, if done at all: the all-or-none principle at work. The purely technical considerations of art are included in amplitude—such as characteristic moment, composition, chiaroscuro, breadth, etc. But their mere presence do not constitute it. It is the ease with which they are handled, the sureness, that makes the amplitude. Notice that the work may have amplitude without being the production of a great artist. Even the work of a beginner may have amplitude—although, of course, the greater the skill of creation the more powerful the amplitude.

The above considerations show that if pictures produced by photography are to attain a status in the tradition of art they must in general conform to the data which have been presented.

The pictures must be classifiable. They must be free of the taint of academicism. They must pass through appearances to essences. They must have amplitude.

We turn now to photography as, in itself, it has grown through its beginnings to a state of comparative maturity. Examining photography thus, we are brought to the realization that, regardless of what potential art may be present in it, it did not have its inception in an atmosphere of art, and has not been nurtured in such an atmosphere since. The history of photography is mainly a record of the struggles and rewards of two other types of workers—the scientists and the merchants. Few indeed were the genuine artists who perceived in it a proper milieu for their intuitive and deep visions of nature. Accompanying the procession, often in the forefront of it, was another type—the man who took photography for an interesting hobby, who was pleasantly thrilled when he saw in his prints some slight murmuring of the majestic voice of a distant Art. We note in passing that many of the present-day pictorial photographers are of this guild.

Gradually, as photography attained a few birthdays, the trend toward authentic art came into existence. But in the beginning it seems to have been as it is now—the technique was in advance of the philosophy. The picture-makers occasionally worked better than they knew. It was in the latter period of the daguerreotype that the first glimmerings of art in photography appeared. It cannot be said that this was intentional. But in many of the daguerreotype portraits of that era there is definite artistic rendering of character. It has been remarked that this came about because of the long exposure required—facial expression and bodily pose became composite and thus characteristic.

Beginning thus unobtrusively, art in photography suddenly found a peerless expositor in the person of D. O. Hill. Some of his portraiture

has never been equalled. Mr. Hill and his work have been recognized, but not emulated to any extent. He stands a lone figure. Photography continued in the channels of science and commerce. The latter tended, for the sake of attracting trade, to seek mere novelty in effect; the former was not primarily interested in the end-product but only in the means by which it could be obtained. The trend in photography that favored traditional art remained generally obscure after the passing of this pioneer figure, though it is true to say that examples of authentic art have occurred and are occurring in photography. But the extent to which this quality is instilled deliberately, remains open to discussion.

It is perhaps correct to say that no one in photography since Mr. Hill has attained to his grandeur. Certainly it is true to say that no one has been as close to traditional art as was he. Examine the famous photographs of later days, and in many instances a serious flaw will be found: mere novelty. In portraiture, for example, a striking pose has often been chosen instead of a pose that is truer to art. It belongs to the first principles of traditional art to say that a pose tending to the conventional is ordinarily to be preferred—because the pose is usually not the important thing and to call attention to it is to interfere with other effects of the picture. This is the important thing: to re-present, through the medium, the essence of the subject as perceived by the inner nature of the artist.

Let us imagine that in this year of 1937 there should be a photographer who wanted to go back to D. O. Hill and possess himself, for use in these modern times, of the practices in photography that were his.

What attitude would it be necessary to adopt towards the craft? We can easily understand that first would come a mien of simplicity. Simplicity in the gaze that sees the subject prior to the picture. Simplicity in arrangement of the subject for the picture (this means, where possible, such as in portraiture, placement of the subject in its lighting; in other picture-taking it means choice of vantage point for the camera, and selection of lighting).

The self-appointed disciple of Mr. Hill would not like the merely unusual. This might have a smell to him of the rococo. A view of nature that is fresh does not mean one that is unusual. The fact is that the number of unusual views in nature is limited, and they decrease in effect as their number multiplies. It is the view interpretive of essence, not of appearance, whose number is infinite. This brings us to an observation concerning present-day pictorial photography which is perhaps the most apposite that could be made concerning it. This is, that in pictorial photography, an earnest attempt is nearly always made to obtain pattern—and, of course, unusual pattern. There are dozens of pictures in the exhibits whose only claim for notice is their pattern. The proof of this is that they could be repeated over and over in a row like the design on the border of a rug, and no sense of incongruity would be noticed. Naturally, for patterns constantly new to be effective they must be unusual. Can it be that here is the motive of a great many of the pictorial photographers: the urge for pattern? If so, the man who has looked at Hill must shrink from a kinship with them, for, in his practice, pattern is merely something he uses in building toward that grand composite of qualities and things which he calls a picture. He prefers, too, to call pattern by another name:

composition. However, if you stood far enough away from his picture (so that the stream of expression from its parts became subdued) he would agree that what you saw was a pattern.

Thus, simplicity and the true freshness, and through appearance to essence: these are the qualities the renascent photographer will combine with his allegiance to the art tradition. In his picture-making he will seek to place himself in a relation to the art tradition such that his knowledge of it becomes more profound and his acquaintance with its works more extensive.

Now we must ask if there is anything nebulous about this conception of the photographer as an artist? We find, particularly in the commercial field, that photography is a hard-headed profession, and as a matter of fact most of the branches of photography have their feet on the earth. Art is undoubtedly a regimen that has a non-pragmatic aspect, but the observation is an apt one that as it approaches authenticity it becomes decidedly concrete and, as art, almost matter-of-fact; while only as it slides away to Bohemianism and dilettantism does it acquire the mistiness and artiness which is abhorrent to the practical worker with an analytical turn of mind: that is, the typical studious photographer of today.

Thus there is no cause for any feeling that with an intenser pervasion of traditional art into our photographic milieu there will be any withdrawal of the photographer from the firm contact with the people around him which is usually his. On the contrary, this relation will be revived and strengthened, for art in a picture is a strong attractive element of it—a brighter strand in the fabric of existence. People thus are drawn to art who know nothing of its means.

The photographer therefore may recognize with confidence that the regimen of photography as an art is something valid and progressive which finds its reason for being in consistent production of pictures meeting certain standards.

Now let us take a glimpse of the obverse of our coin of investigation. How much efficacy may photography have in art representation? It is the usual thing for a photograph to be literal. Uncontrolled by the operator, this is the kind of record the camera makes. It is not impossible for the photograph to be romantic. Let the operator work with that in mind, employing lighting (and diffusion discs) to that end, and the picture will be romantic in motive. But—and here we speak with emphasis—it is possible for the photograph to be realistic. And if the art worker believes in realism, it would seem that he is able to work more effectively in photography than under any other aegis. Why? Because art manipulation of the literal camera record produces a realistic picture with no forcing of latencies, no straining for the effect.

At this point we may consider briefly what is meant by realism.

Principally we distinguish realism from literalism. If we study realism and romanticism, we find that literalism is neither, and that realism is the opposite property to romanticism. When, therefore, the statement is made that the modern photographer is at his best in the role of realist, the implications arise that he steers away from literalism and that he does not seek romanticism. Literalism is the bare rendering of all the facts evident

in a matter, some of which may be atypical to the subject selected for representation. Realism is the rendering of the facts evident in a matter, all of which are, as rendered, typical of the reality of the subject selected. Thus, if we have a successful realistic photograph, we have one which presents a typical rendering of its subject as a real thing—and it is important to note that the higher the art of a given photograph, the more sublimely typical is this rendering of its subject matter.

It is thus apparent that realism is something more than what many a photographer (especially in the professional field) tacitly deems it to be. According to the idea held by many of these people, the brand of photography they usually produce would have no especial designation, other than "good work." But to make a realistic photograph it would only be necessary to leave in, say, a mole on the chin of the sitter instead of retouching it out.

Of loose constructions such as this is much of modern photography compounded.

There is evidently a great deal of training that could be acquired by certain workers in advancing traditional art in photography. If these photographers will set about acquiring this training, the trend in photography which favors the progress of this art will be measurably furthered.

A "Vest-Pocket" Darkroom

Gilbert Harris

THERE is some such nonsense about "In the spring a young man's fancy" does something or other but in the fall what happens? Usually the boss tells you you can take the vacation you were supposed to get in the summer, provided you care to or if you still have any money left. So you proceed to load up the old car and go places.

You carefully assemble the bare necessities for your trip and pack them in the old bus and as the pile mounts higher and higher you begin wondering what camera to take. If you take the four by five, you reason, it'll take up too much room, and besides who wants to carry a couple of big cases when climbing around the mountains? No, better to take the minnie, you can slip that in your pocket and not be burdened with a lot of bulky cases. Besides you'll be taking loads of pictures and it's cheaper to operate. So you slip the minnie in your coat pocket and reserve the trunk on the back of the car for accessories, gadgets, cans of film, etcetera. You can't win; it's six of one and a half dozen of the other.

I doubt if there are many camera enthusiasts who, at some time or other, have not taken long trips, possibly several hundred miles, and stayed a week or more during which countless frames of film passed behind the shutter. I also doubt that there are any who have not met with some disappointment upon returning home and developing their



Fig. 2. Light-tight lid removed showing ample space for solutions, tank, winder, bulk film, etc.



Fig. 3. Front panel removed and sleeves pulled out preparatory to working.

film to find that either the film did not pass through the camera, or if it did, it was under or over exposed. Or if absolutely nothing was wrong with it, we soon discover that had we included a little more of that rock in the background we would have had a salon print.

I think the truth of the matter is, that after we have been on the scene a few minutes and have become somewhat reconciled to the grandeur of nature, we develop what one writer chose to call "camera myopia." We can't see pictures that are right under our nose. That is, not until after we have returned home and developed the negatives. Then it's too late and we try to console ourselves with the thought that some day we'll be going back there and we'll shoot them over. But we never do, or if we do, the scene has changed and there is no longer a picture there.

Why, when we go to all the trouble and expense to take a trip of that nature, with the thought of taking pictures uppermost in our minds, don't we make sure of what we have on the film before we leave? "No place to work," you'll say, or "Too much trouble, I'm out here to relax and enjoy myself." That leaves only one answer. To those who cannot derive a certain amount of joy and relaxation from their pet hobby I would suggest changing hobbies.

Of course we have all heard of changing bags. Personally I have never used one. I can make no statement pro or con, regarding them, but I would assume that they might be a little unhandy to use for miniature camera technique.

However, some time ago two friends of mine built themselves the handiest outfit I have yet seen for processing in the field. As they both use miniature cameras the outfits are made to suit their particular requirements and unlike most home-made gadgets they are truly efficient.

I'll not bother you with a lot of figures and dimensions and "what-to-do-next" instructions. If you are like me you hate to read anything the pages of which are cluttered up with a lot of algebraic calculations.

However, they purchased some half-inch white pine lumber and built a box, the inside dimensions of which are ten inches deep, nine inches wide and fourteen inches long. The lid which merely lies on top



Fig. 4

Fig. 5

Fig. 6

Fig. 4. Lid removed to show ample space for loading developing reel.

Fig. 5. Demonstrating ease with which magazines may be reloaded.

Fig. 6. Method of unloading and processing 4 x 5" cut film in two 5 x 7" trays, if necessary.

was light trapped as may be seen in figure 2. The whole box was painted a dead black inside and out as a further precaution. It may be well to mention here that a very good dead black may be made by mixing dry lampblack with shellac and thinning with alcohol to the desired consistency. It dries fast and leaves no highlights or brush marks.

The little door at the front, visible in figure 2, is a slip-fit, and when removed allows the sleeves to be pulled out. The sleeves in this case were made of suede from an old jacket, and sewn up on a sewing machine by friend wife. An elastic band may be inserted in each sleeve if you prefer, thus insuring a tight fit, though I doubt that this is necessary.

There is ample room in the cabinet for everything necessary for the processing of film, and every operation can be carried out in the glaring sun without a possible chance of spoiling anything by fogging.

Figure 6 shows how a five by seven tray of developer and another of hypo fit nicely into the box for the processing of four by five cut film or plates.

Miniature camera magazines may be loaded and unloaded by means of the winder shown, figure 5, with surprising ease.

The illustrations are self-explanatory. Since the inception of the two boxes my friends built, one of them has gone a step farther and covered the lid with paper foil, and now when he goes out and wants to shoot close-ups of bugs or flowers or what not, he just takes the cover off his darkroom and uses it as a reflector. Clever, what?

So next time you go on your vacation there should be no excuse for not returning with some masterpieces, if you take one of these along with you.

What's that? You can't get it in your vest-pocket? That's nothing, neither can you put the so-called vest-pocket cameras in your vest-pocket. But you can leave out a lot of the stuff you carried in the trunk of your car last year and didn't use, and in its place carry something useful; a darkroom.

Cinema Section

Edited by

William A. Palmer

A Photoplay For The Summer Camp

FEW are the summer camps, either for boys or girls, that do not use movies. The natural means of recording the activities and good times of the vacation period, the producing of camp movies is valuable as a means of maintaining interest in a camp program. To the boy or girl scout camps or the municipal organizations whose camps depend upon the contribution of public spirited people, a movie of the camp can be worth many times its cost as it shows its benefactors the value of their aid. The private camp also can make unlimited use of a film during the winter and spring months when soliciting for the coming season.

The most obvious type of film for a summer camp is one of the news reel type, consisting of a film record of the activities and events of the season. It is a simple type of film to produce for it requires practically no preparation. One of the counselors or the director need only remember to have sufficient film on hand to keep the camera an unforgetting spectator. The simple record film can be elaborated somewhat with an elementary story theme to create a better continuity and tie the various activities together. Following a typical camper through the day from reveille to taps has been used as a film theme with good results by many camps, and other variations in portraying routine camp life can be worked out. All film ideas of the news reel type have the big advantage, besides their easy production, that every person in camp can be shown more or less prominently in some one scene—a very important factor as far as parent interest is concerned.

The big disadvantage of the simple news reel or record type of film is the lack of variety between films of two successive year's shooting. The theme or thread that holds the activities together can be changed and there are new faces, but the general effect is the same. Furthermore, although all young people like to pose for the movie camera, the making of an activity reel cannot be said to enrich the enjoyment of camp activity materially.

The making of a photoplay, however, will furnish a stimulus which will hold young minds in the clouds for many hours. A real honest-to-gosh story which can be enacted in the locale of the camp but which can be made to show suspense for or daring by the performers, can be made an exciting camp

activity which will hold a place in camp memories right along with swimming and campfire pleasures. Such a film, although not an exposition of camp activities, is just as good if not better propaganda for the spreading of a favorable impression of the camp. No one can look at a wild and woolly yarn, showing youthful heroes vanquishing the villain with gusto, without realizing that camp must be a pretty swell place where such day dreams can be put in celluloid form.

For a number of years the Lokoya Boys camp in California has made a photoplay each season with exceptionally satisfactory results. There has also been made at the same time an activity film for record purposes, but the photoplay has received the honors by a large margin. It is on the experience gained in making these films that the following suggestions are based, in the hope that other camps will make better use of amateur movies. In outlining the methods of camp photoplay production, two types of people have been in mind: the camp director who is naturally anxious to improve his program and show his camp to the best advantage, and the amateur movie maker who is anxious to have a good project upon which to exercise his cinematic talents. It is these two who must get together in making a photoplay, for although the director may be able to make fine movies of activities, he is usually far too busy to give the proper attention to photoplay details. The amateur movie maker who has a vacation during the camp season should be particularly glad to work out a camp picture, for where else could he find a group of eager actors who could be called upon at any time of the day, every day, for a period of one to six weeks? The usual major obstacle of the amateur photoplay is the inability of the members of the cast to find a time when some other less enjoyable task does not demand their services.

Photoplay a Full Time Job

Camp directors who obtain the services of a competent movie amateur should realize that the making of a photoplay is a big job and the person given the responsibility should not be loaded down with a lot of routine counselor duties. His main reason for being in camp should be for the purpose of making the picture. A photoplay is a unique type of activity in that although it takes the cooperation of a good many people, it must be managed by some one person who is able to visualize the completed result on the screen. When any one scene is photographed, the person in charge of the shooting must have in mind the action and appearance of the two scenes coming before and after. It is only through careful planning and thinking through the entire action that smooth results can be obtained in the photoplay form, and that requires someone who has worked with movies a good deal and has actually photographed and edited film. Woe to the camp photoplay that gets into the hands of a dramatic coach who does not know motion picture technique!

The Story

It is important, in order to maintain the enthusiasm of the campers, to have a story which is intriguing to them. Especially if the camp is made up of young boys of twelve years of age or thereabouts, a wild improbable yarn is the best. It must have plenty of action and show the main characters beset by some menace such as smugglers or horse thieves who are eventually rounded up by the cleverness of the campers. Naturally the locale of the picture should be the camp, so that the locations and properties will look convincing. It

would be foolish for example to pretend that the setting for the story were a South Sea island when all the trees around indicated that it was high mountain country, unless such discrepancies are used for comedy effect. Nor would it be convincing to have a story that would call for many interior scenes which would have to be "faked" in the cabins or dining hall of the camp.

The story will have to be original and woven around the locations and properties at hand, for it is almost impossible to find a story already written which could be successfully adapted. Also the story should be designed so that a large number of campers can appear. This is a point where there is a good deal of difficulty reconciling ease and smoothness of film technique with the interests of the camp director and parents. The camp director wants to have each boy shown somewhere in the progress of the story and naturally each parent is only interested in the film if he knows his son is a performer. On the other hand large casts are very cumbersome to handle and the picture is apt to founder if it gets too involved. A logical solution to the problem is to center the main action of the plot around a few characters and then shape the difficulties of the leading characters so that the remainder of the camp can come to the rescue en masse. In the ensuing mob action there is ample opportunity to feature the campers who previously have not been shown. For example, suppose the plot involved the uncovering of the hideaway of a group of desperate smugglers. (All unsympathetic characters such as smugglers should be taken by counsellors.) By a series of shrewd deductions and clever preparations, the group is all set to make a capture of the desperadoes and turn them over to the sheriff. Something goes wrong, however, and part of the group is captured. The rest escape and go after the sheriff but through some circumstance he is not available. Nothing then to do but dash back to camp, organize the remainder of the campers, and go to the rescue! An exciting free for all fight brings the criminals their deserts and fame to the campers.

Such is the story material that makes good camp films. The plot must not be too long or involved—most amateur photoplays attempt to squeeze a ten-reel story in a reel and a half. A good camp photoplay of one or two reels can hardly treat a plot more complicated than a "short short" story. In choosing the type of menace or peril that is to confront the campers in the film play, one must be careful to select something improbable enough in the eyes of parents so that there will be no chance of those solicitous people thinking that such a peril might actually exist to endanger their children. On the other hand the peril must not be one that seems ridiculous to the campers. The key to this problem is to put the kids in a situation that might easily be an actual experience of adventurous adults, although one that the parents would know could not occur in the camp locale. Any mishap, kidnapping, or other unpleasant happening within the camp ground should be taboo. If campers are shown falling into the clutches of desperate men they should be shown getting into such a predicament by their own adventurousness and curiosity. Any physical injury to an actor should not be included in the story.

Getting the Production Started

As mentioned above, the making of a photoplay is pretty much a one-man job in that some one person must have the scene requirements completely in mind. Two people who both understand photoplay technique can often collaborate with success, but more than two "cooks" are fatal. Nevertheless the

entire camp must be made to feel that it has a part in the planning as well as the making of the film story. At the start of the camp, the producer of the film should get a possible story outline worked out and describe it during a campfire program. The campers should be told that the idea is very tentative and that suggestions would be very welcome. The next day will see suggestions aplenty from imaginative minds and of course few will be practical. Most will be of such elaborateness that even Hollywood would find difficulty with the technical problems involved. But out of it all may come several good ideas that can be incorporated.

The producer should then personally work out a very complete script of the story, writing every scene down on paper and visualising every scene as he wants it to appear in the completed job. He will be aided in this if he picks out the actual locations that will be used for the scenes and goes over the action in imagination, choosing the camera positions and deciding on the order in which the scenes will be shot. This method of privately working every step out before the cast is brought onto the "set" will be extremely valuable when actually working with the enthusiastic but sometimes cantankerous kids. One should never try to shoot a sequence which has been but vaguely thought out and attempt to "work it out" when the actors are at hand.

After the story and script are completely worked out, another campfire should be devoted to describing the picture as it will appear. A few "Hollywood" adjectives should be used here to get enthusiasm aroused. The problem of casting the story should be treated rather lightly by explaining that the picture will not "star" any one person but that there are many parts so that everyone in camp will have a chance to show his mettle.

The actual casting of the important roles should be done by the producer more or less privately, for during the writing of the script he will have certain campers in mind and can somewhat design the action to fit them. Tryouts are never necessary, for they mean nothing as far as aptitude is concerned and only bring up a bad competition problem.

The selection of the lead characters should be dependent upon several characteristics. First of all is poise. Any young boy or girl with normal poise will make a first rate movie actor, for all there is to the job is preventing them from acting unnatural! Good looks should be entirely secondary as a qualification although if one can find good looks and poise combined, he then has something. In directing the young actors, one must always insist on restrained gestures and expressions to prevent "amateurishness." The actors should be allowed to use their imaginations in interpreting the part and the director should not demonstrate the action lest he get just a poor imitation of his own not too fine acting.

In conclusion it might be well to say something about the equipment necessary for amateur photoplay production. The equipment needs are few and simple: a good camera with a lens in focussing mount or with a portrait attachment for close-ups; (all conversational titles should be cut into close-up scenes). A good tripod which must be used on all scenes; two or three reflectors (aluminum painted wallboard); and a fading glass or iris-out attachment to use in marking the start and finish of episodes in the film story. This last is not absolutely necessary, for fades can be added to the film after it is processed.



"Roofs"

Slavko Smolej, Ljubljana, Yugoslavia

Advanced Medal Print

Due to the absence of the editor, the competitions comments for this month are written by Mr. Lucien Perona, painter and advertising executive of San Francisco. Mr. Perona looks at the pictures with the eyes of the painter, thus bringing an entirely different point of view to these discussions.—Ed.

■ Mr. Smolej displays a firm understanding of composition with this picture. He has limited himself to a single motif, and has avoided the temptation to repeat that motif a number of times. By adopting a more distant viewpoint he could probably have achieved several repetitions of this same design. Too many photographers it seems to me appear to feel that such repetitions is always desirable. On the contrary it will weaken the drama and strength of the single composition. The black areas, although making a very nice pattern through the print, are not distinct enough nor dark enough to carry the likeness of the roof. There is a very definite lack of support for the texture produced by the roof and the texture produced by the two windows showing in this print. It is unfortunate that the brilliancy of the glass could not have been preserved to play against the medium tones of the roof which would have enhanced the value of the black. The idea behind this composition is very sound and reminds me of some of the Cezanne landscapes which are made up entirely of simple cubes in color. I like particularly the dark shadows placed on the roof in the lower right hand corner, apparently caused by a chimney.

Data: 3x4 cm. Dolly; Schneider Xenar F:2.9; 1/50th sec. at F:5.6. Bright sun in September; Lifa No. 1 filter. 11x12" print on Agfa Royal.

*"Glass"*

Fred G. Korth, Chicago

been controlled if the background against the base of the graduate could have been darkened, thus producing a solid base for the entire composition to rest on. The print, technically, is all that could be desired, and in this case we feel that the black border completely surrounding the print is absolutely necessary and is used to good advantage.

Data: 5x7" Deardorff camera; 27 cm. Symmar; 10 seconds at F:22 on Agfa Superpan Portrait film; the light source was directed entirely on the background. Print size $9\frac{1}{2} \times 13\frac{1}{2}$ inches.

Third Award**Advanced Class**

■ Our first impression, upon looking at this print, was to change the size by cutting from the left of the print at least two and one-half inches. This would have destroyed the elongated feeling which this print gives one when first looking at it, and would also make a much better balanced composition.

We would like to suggest the darkening of the tonal values of the cuff and the sleeve, allowing the pattern of the face and tie to play against the solids of the rest of the composition.

We wish particularly to draw attention to the expression of the subject. It is very good. The hand in the foreground is excellently placed. However, the composition would have been greatly improved had the left hand of the subject been blotted out. This spot close to the corner of the picture tends to emphasize the triangle of the knee which is not needed in this composition.

Data: Studio camera; Zeiss Tessar lens; stop F:11; Defender X. F. Pan film. Print size $10\frac{3}{4} \times 13\frac{3}{4}$ inches.

*"Portrait"*

Don Wallace, Chicago

Fourth Award
Advanced Class

■ A composition of this type, depending on the movement of circular lines, should be framed very carefully. This print would be much more effective if one inch were cut from the top and the right side of the print. Circular lines are always more interesting if they are definitely cut away from right angles.

Regarding the texture of the eggs against the texture of the bowls and dish, we do not feel that there has been enough differentiation, and the absence of any contrast between the two surfaces have definitely weakened the three eggs in the bowl. It is very doubtful whether the reflection in the bowl will be held in the reproduction. However, by making the most of the pattern produced by this reflection, a more interesting note would have been felt in the composition. The composition now suffers from a superabundance of gray tonal values, all pretty much in the same key. Placement of the objects is not only interesting, but very sound. It is surprising sometimes to see how much of a picture can be realized by the proper placing of such objects.

Data: Dallmeyer Reflex camera; 3 seconds at F:8; Agfa Isochrome film pack; print on Agfa Brovira. Print size 8x9 1/4".



"Eggs"

Sorab J. Kharegat
Bombay, India



"Hosing Settling Basin"
Harry Goodwin, Washington, D. C.

Fifth Award

Advanced Class

■ This is an excellent photograph and leaves very little to be desired. We wish to compliment Mr. Goodwin particularly on the texture maintained in the water and the mud, and the action of the line made by the water, hose and the drain. The texture of the wet cement is brilliantly portrayed, the highlights make the entire print scintillate. The only suggestion regarding the composition we have to offer is that the action would have been a little more dramatic if the top of the hose had been cut out of the picture. It would have effectively strengthened the composition. This composition, however, shows that Mr. Goodwin knows what constitutes a picture, and his efforts should have been rewarded more substantially by the Jury.

Data: Speed Graphic; 5/8" Zeiss F:4.5; 1/50th sec., at F:11 on Agfa Superpan, with K-2 filter; developed in M. Q. Borax; print on Agfa Brovira glossy. Print size 11x14 inches.



"Shot Put"

Victor Pokorny, Arnold, Pa.

Amateur Medal Print

■ We have here an attempt at one of the most difficult things to control in a picture, that is the human figure in action, against a solid gray background, practically all in the same key. This offers no relief to the movement and throws the entire weight of controlling the action on the framing of the print. Mr. Pokorny has not been successful in keeping the eye focused on the splendidly photographed muscles of the man's back, but rather the eye travels up along the arm to the hand and out of the picture, and it is with difficulty that one is able to bring back his attention to the actual subject matter.

Rendition of the figure is very good, but there has not been enough difference maintained between the texture of the ball and the subject here. The sky, being a solid gray, is very monotonous. I think the entire print would have been improved if more of the torso had been shown, which would have given a base for the movement and provided a pivotal point which this picture lacks. The right elbow and the tips of the fingers of the left hand are almost equidistant from either edge of the print, and both are pointing directly to the corners. It is the absence of thought regarding such things as this, that weaken a print of this kind. The hand rather than pointing to the corner of the print, should point either to the top of the picture or to the side.

Data: 9x12 cm. Maximar B; 13.5 cm. Tessar; 1/50th sec. at F:8, on E. K. Verichrome, in D-76, with K-2 filter; 11x14" print on Defender Velour Black D, normal.

Second Award

Amateur Class

■ The technical data on this print, in explaining that this is a self-portrait, has proven that the photographer, like a painter, can impart to his finished print his entire personality. The expression of the subject and the pose are excellent. The camera placed as it is, completely surrounded by the patternless blacks, tends to relieve a large mass of color which would have been rather difficult to handle and also acts as support, strange as it may seem, for the head. We wish particularly to compliment Mr. Aydlett on the high key of the tonal values directly behind the line of the neck, which gives the sky as a background both depth and movement. We would like to suggest that the entire composition would be improved by cutting off about one and a half inches from the top and about one and three-quarters inches off the left side of the print. This would tend to destroy somewhat the action of the hand in leading one out of the composition and also make the illusion of being outdoors more complete.

Data: 9x12 cm. Welta; 15 cm. Xenar F:3.5; 1/25th sec. at F:32 with A filter, on desert at noon in August. Agfa Superpan in DK-76; E. K. P. M. C. No. 11 in D-72. Self Portrait. Print size 11x14 inches.



"In the Desert"

G. D. Aydlett, Norfolk, Va.



"Shnelligkeit"

A. H. Normand, Berkeley, Calif.

Data: Contax F:2.8 Tessar; E. K. Super X, in Ultra Fine Grain; Agfa Brovira Royal in D-72. Print size 11x14 inches.

Third Award

Amateur Class

■ The absence of detail in a composition of this sort throws the entire weight on the texture of the objects photographed. In this case, we have two very highly polished surfaces, with no pattern for them to play against. The interest in photographing a subject of this sort lies in the rendering of the true values of the article and the retention of the very highly polished surfaces. The photograph should be brilliant, and no attempt should be made to soften it down. This criticism is based on the fact that the subject is obviously posed. However, the movement meant to be portrayed is entirely absent. Before attempting to photograph in the abstract manner, it is well for the photographer to understand the basic principals of modernism and not to attempt to do something which has evidently not been thoroughly studied. The desire to follow the line of movement induced by the radiator ornament is not arrested by the black shadow in the lower left-hand corner.

Fourth Award

Amateur Class



"Cecelia Maria"

James P. Robinson, San Francisco

the gods" upon the purity of Cecilia Maria. In attempting to give a print the feeling that the photographer wanted in this case, he must remember that simplicity at all times is more effective than an overdone subject.

The costume and the expression in the girl's face, without the help of the mission in the background, would not only have made a more dramatic photograph, but structurally would have made a far more artistic one. My suggestion in this is that the entire figure be moved over at least three inches, with more of the top of the head and the side showing, and that the mission, sky and hills be completely taken out. The

(Continued on Page 301)

Fifth Award

Amateur Class

■ The control of values in this print has not been very successful, and we can't help but feel that if the blacks were darker, and the two figures, the child and the dog, were practically silhouetted against the bars, that great strength would have resulted thereby. The original print being in sepia, we feel, also tends to weaken it.

We wish to compliment the photographer, however, on the nice pattern that has resulted from the grating and the shadows on the wall. We feel that this would be enhanced if the black shadow in the lower left hand corner of the print and the shadow cast by the window in the upper right hand corner of the print had been emphasized more. The black border completely around the print does not help it in any way.

Data: 9x6 cm. Voigtlander Avus; 1/10 second at F:11, on Agfa Isochrome; at 5 p. m.; 9¼x11½" print on E. K. Contrast Bromide.



"Soft Shadows"

N. W. Goghari, Bombay, India

Monthly Competition

Scoring for Club Trophy Cups

The following won points for their clubs in the Advanced Class: Fred G. Korth and Don Wallace, for the Fort Dearborn Camera Club; Slavko Smolej, for the Fotoklub Ljubljana; and Harry Goodwin, for the Washington Pictorialists.

The following won points for their clubs in the Amateur Class: Victor Pokorny, for the Aluminum Camera Club; A. H. Normand, for the Miniature Camera Club of Oakland; and G. D. Aydlett, for the Norfolk Photographic Club.

The following prize winners have no club affiliations: Sorab J. Kharegat, James P. Robinson and N. W. Goghari.

Contributing Clubs

Aluminum Camera Club (New Kensington, Pa.)	Fotoklub-Ljubljana (Yugoslavia)
Boulder Lens Club (Colo.)	Golden Gate Miniature Camera Club (San Francisco)
Buckeye Camera Club (Cincinnati, Ohio)	Miniature Camera Club of Oakland (Calif.)
Camera Clique (St. Louis, Mo.)	New York Edison Club
Camera Club of Long Beach (Calif.)	Norfolk Photo Club (Va.)
Capitol City Camera Club (Bismark, N. D.)	Oklahoma Camera Club
Chattanooga Camera Club (Tenn.)	Pack Rats (Pasadena, Calif.)
Denver Lensmen (Colo.)	Photographic Society of San Francisco
East Bay Camera Club (Oakland, Calif.)	Pictorial Photographers of America
E. P. I. C. Group (San Francisco)	Sierra Camera Club (Sacramento, Calif.)
Fort Dearborn Camera Club	Washington Pictorialists (D. C.)

STANDING OF CLUBS

Large Clubs Advanced Class

Fort Dearborn Camera Club.....	23
Lost Angeles Camera Club.....	14
Fotoklub Ljubljana	11
Photographic Society of San Francisco..	11

Small Clubs Advanced Class

Camera Clique.....	11
Baltimore Camera Club.....	6
Pack Rats.....	2
East Bay Camera Club.....	1
Washington Pictorialists.....	1

Large Clubs Amateur Class

Golden Gate Miniature Camera Club....	4
Miniature Camera Club of Oakland.....	3
Photographic Society of San Francisco..	3

Small Clubs Amateur Class

E. P. I. C. Group.....	9
Riverside Camera Club.....	9
Oklahoma Camera Club.....	7
Washington Pictorialists.....	7
Aluminum Camera Club.....	5
Nassau County Camera Club.....	5
Norfolk Photographic Club.....	5
Crockett Photographic Society.....	2
St. Louis Camera Club.....	2
San Jose Camera Club.....	1

(Continued from Page 300)

only movement in the background should be the transition of grays from medium at the bottom of the print to a very light gray at the top. The harsh line made by the mantilla should be softened considerably.

Data: Voigtlander Avus; Skopar lens; portrait 1/5 second at F:8, with modified basic light, on E. K. Panatomic in D-76. The mission and clouds are from separate negatives. The three were combined in projection printing. The following processes were used, Projection Control, diffusion, and montage. 8x10" print on E. K. Opal Z, in Edwal 102.

Club Notes

Weston Receives Guggenheim Fellowship

Every photographer can take pride in the appointment of Edward Weston as a Fellow of the John Simon Guggenheim Memorial Foundation. This recognition of photography will bring satisfaction to every photographer and we are sure that all extend their thanks with ours to Mr. Weston.

This is the first time that any photographer has received a Guggenheim Fellowship and its importance to photography cannot be overemphasized.

Edward Weston's project will cover the Pacific Coast and he will picture its beauties in his own inimitable way. Naturally, this will not be a mere documentary recording of the coast for it will be the Pacific States as seen through Weston's eyes and that may mean a picture of a pebble and next a picture of a mountain. It may be that Edward Weston will confine his tour to California as he has said that it offers possibilities for years of work.

May we congratulate the directors of the Guggenheim Foundation on their selection of Edward Weston for in the opinion of this magazine no better man could have been chosen.

San Francisco Salon

The San Francisco International Invitational Salon will open May 16 at the San Francisco Art Museum and will continue until June 13th.

We have seen enough to know that a really fine show has been achieved. A full measure of praise should go to Committee Chairman James Hobart, for the exceptionally fine job he has done. The Photographic Society of San Francisco and the San Francisco Art Association, as sponsors, have something to be proud of.

The show contains 350 prints of unusual excellence collected from all parts of the world and as they are hung in National units the interest and educational value is increased.

The careful selection of these prints make this salon of unusual importance and one that photographers cannot afford to

miss. The Museum is open from 12 noon until 10:00 P. M. Don't fail to attend.

Frontier Films

Frontier Films is an independent, non-profit motion picture organization, formed by a group of forward-looking professional scenarists, directors, dramatists, and cameramen. It is the purpose of this group to produce films that will truthfully reflect the life and drama of contemporary America.

Everyone realizes the tremendous power of the motion picture in forming opinion. However, little use is made of this power in the name of progress and benefits to mankind. A rare producer nowadays will toy delicately with some subject of social importance but most prefer the old triangle or a topic guaranteed not to budge even the best oiled steam-valve.

Frontier Films will produce films that will actually portray the world we live in and progressive organizations and agencies in all fields will find their skilled technical staff ready to serve them in the production of films that will use the motion picture's power on the side of progress.

Those who saw "The Plow That Broke the Plains" will long remember its message and power and photographers particularly will remember the technical excellence of its photography. This writer has not had the opportunity to see "The Wave" but, if the comment of the critics is to be valued, this production sets a new standard in photographic excellence. Members of the staff of **Frontier Films** were primarily responsible for the production of these fine pictures, particularly its President, Mr. Paul Strand. Another staff member that is well-known to photographers and readers of **Camera Craft**, is Mr. Willard Van Dyke.

Naturally everyone welcomes the formation of **Frontier Films** and photographers will await their work with special interest as each will be a photographic lesson of great importance.

For further details, write Frontier Films, 10 East 40th St., New York, N. Y.

Owl Drug Co. Announces Golden Gate Bridge Photo Contest

The Owl Drug Co. of San Francisco will award \$100.00 in cash prizes for the best snapshots made during the opening days of the Golden Gate Bridge. Enlargements as well as snapshots are eligible and the contest opens with the opening of the Golden Gate Bridge and closes midnight June 15th. Pictures must be made after the opening of the bridge and all prints entered must be finished by the Owl Drug Co. Pictures will be judged solely on general appeal and the interest they arouse. Entry blanks may be obtained from any Owl Store or from the Contest Dept., Owl Drug Co., 657 Mission St., San Francisco, Calif.

Photographic Society of America To Hold Chicago Convention

The annual meeting of the Photographic Society of America will be held in Chicago, October 8th and 9th, details of the convention plans and program are not yet available but will be announced at a later date.

The work the Society is doing for the betterment of photography is one in which all serious photographers should be active participants. It points the way to progress that can only be attained through the co-operation of all photographers.

Full details and application blanks may be obtained from B. H. Chatto, Secretary and Treasurer, 1300 Milton Ave., Pittsburgh, Pa.

More National Convention Program Plans Released

The program of the Convention of the Photographers' Association of America, to be held in Chicago, Ill., August 23rd to 27th, is still in the making but some of the highlights have been released for publication.

William Cassens will speak on "What Photo-Engraving Can Mean to the Professional Photographer." "How to Make a Small-Town Studio Pay," will be the subject of Ray Hart, president of the Illinois Photographers' Association. Mrs. Harry M. Schaeffer will speak on the problems of the reception room and the handling of customers. A subject of immense present importance is that of J. C. Weller, who will talk on "Profitable Portraiture with the Miniature Camera."

The rules for the Picture Exhibit this year have been greatly simplified. Only two classes, portrait and commercial, are open to entry and the system of awards has been changed so as to eliminate certain annoying features that became apparent in previous years.

With an all-time high record of exhibi-

tors already registered, this year's convention will be a record breaker in more ways than one and no one will want to miss it.

A Successful Convention

The Associated Photographers of the Sacramento and San Joaquin Valleys held their second annual convention in Sacramento April 17th and 18th, and in doing so established this meeting as a photographic event of first importance in California.

The excellence of the lectures, given by a long list of well-known photographers, the splendid exhibit of pictures, and the increased number of exhibitors of photographic materials all contributed to making the convention of important and lasting value.

This magazine stated before the convention that last year's program had set a standard that would demand the most of this year's committee if it were to be maintained and all who attended the meeting will agree that they more than attained this standard. The Association is to be congratulated on the convention's success and all will be looking forward to next year's meeting.

Notes and Comments

Bragott Film Winder

Here is a money saving convenience for Minicams. The Bragott Film Winder makes it possible to buy your 35 mm. film in bulk and wind it neatly to the exact length and number of exposures required for the job you have in mind. It can be set for any required number of exposures and accommodates magazine, cartridge or plain spools.

The Bragott Film Winder is simple to operate and of course eliminates scratching and fingerprints on your film. Solidly built, it is made to last a life time.

Send for a free descriptive folder. Bragott, Designers of Needed Photo Accessories, Dept. C-2, 208 W. Washington, Chicago, Ill.

Camera Guild, Inc.

The Camera Guild, Inc., is an organization designed to act as a picture agency for amateur photographers. With the market for photographs increasing every day due to the influence of such magazines as Life the possibility of an amateur making his hobby pay for itself has become an actuality. The demands of advertisers for pictures of every kind is also increasing daily. For a free booklet describing this service, write Camera Guild, Inc., Dept. C-6, 385 Madison Ave., New York, N. Y.

New Miniature Negative File

With the possibility of exposing three dozen negatives in a few minutes the problem of filing the rapid accumulation of miniature camera film is quite important. Rapid location and identification of a desired exposure is one of the chief requirements, after which follow protection from dust and finger marks and especially the damage that results from frequent rolling and unrolling.

A new minicam negative file is now available in loose leaf book form, permitting flat, visible filing in transparent moisture proof envelope pages, each with a capacity of one complete roll of thirty-six 35 mm. film. A record blank is provided

for each page for making notes on individual exposures. Books are substantially bound with a weight-loaded reflector cover to keep the contents flat. Each page has four parallel slots with space for nine exposures per slot. Forty pages are included, providing capacity for 1,440 negatives, to which additions can be made as desired by inserting extra envelopes. The books are bound in attractive black or brown leatherette, and are priced at \$7.50 each, postpaid. The Minicam Co., 3150 Wilshire Blvd., Los Angeles, Calif.

Jena Optical Glass Filters

The Jena Optical Glass Filters are distributed in the United States by Medo Photo Supply Corporation exclusively. These excellent filters are made of solid glass, uniformly colored throughout, plane-parallel, and ground and polished on both sides.

The Jena Filters are equal in quality to the best lenses and therefore they eliminate the risk of losing the fine definition of the photographic image.

A descriptive and instructive folder on the Jena Filters and their use, is distributed free. Write Medo Photo Supply Corp. 15 West 47th St., New York, N. Y., for your copy.

Stamp-O-Title

Stamp-O-Title offers a handy, all-purpose titling outfit for 16 mm. and 8 mm. movies. The titles are printed with rubber type on special composition titling surfaces with gold or silver powder and a patented solution that outlines the lettering and forms an absorptive base for the powder.

Three composition backgrounds are supplied with the regular titling set. A black one for black-and-white, a red one for Kodachrome and a transparent surface for use with backgrounds. Six pictorial backgrounds are also available for use with the transparent titling surface. An eradiator fluid is used to clean the titling surfaces, leaving them blank and clean for further work.

The complete set is available for \$5.75 with pictorial backgrounds 50c extra. For complete details see your dealer or write: The Stamp-O-Title Co., 318 East 116th St., Dept. C-6, New York, N. Y.

Chemicals for Fine Grain Development

The McBee Chemical Co., is offering a complete line of chemicals for fine grain development. With formulas for fine grain developing becoming increasingly delicate, it becomes increasingly important to have chemicals of assured purity and reliability. The McBee Chemical Co., can give you these qualities. They are also distributors for the famous Champlin Developers. For further details and prices, write McBee Chemical Co., 1624 Boren Ave., Seattle, Wash.

Kodachrome Film Price Reduction for Miniature Cameras

Eastman Kodak Company announces a reduction in the price of Kodachrome Film for miniature cameras.

Kodachrome Film No. K135, and No. K135A for Photoflood lighting, both 18 exposures, for Kodak Retina and similar 35 mm. miniature cameras, is reduced from \$3.50 to \$2.50, including processing.

Kodachrome Film No. K828, and No. K828A for Photoflood lighting, both 8 exposures, for Kodak Bantam Special, is reduced from \$1.75 to \$1.35, including processing.

Willoughbys New Catalogue Ready

Willoughbys announce their new "Equipment and Accessories" Catalogue is now ready for distribution. This unusually complete catalogue comprises 60 pages of items of interest to the amateur and professional photographer. Write for your free copy now to, Willoughbys, 110 West 32nd St., New York, N. Y.

Zeiss Ikon Exhibition in St. Louis

The Zeiss Ikon Exhibition of Photographs which has been such a great success in the East and on the Pacific Coast, will be shown in St. Louis on May 26 to 28, Wednesday, Thursday and Friday, at the Statler Hotel, daily, from 10 a. m. to 9 p. m. This remarkable exhibit contains more than 300 enlargements made from photographs taken by a great number of Zeiss Ikon Camera users from all over the United States and other countries.

The New Leitz VIII-S Projector

With the greatly increased interest in color transparencies aroused by the practical use of Kodachrome and Dufaycolor, the need for proper projection has become increasingly important.

E. Leitz, Inc., constructed their New



Leitz VIII-S Projector

VIII-S projector with this need of a practical home projector in mind. It is small, compact, but at the same time offers unusually brilliant screen illumination, an essential in projecting color transparencies. The projector uses only a 250 watt lamp but due to the ingenious system of condensers the necessary screen illumination is possible, at the same time affording safety to the delicate colors of the transparency. Extremely versatile, the VIII-S Projector will project single frame film slides, Leica double frame film slides, or 2x2 inch glass slides. For complete details write, E. Leitz, Inc., 730 Fifth Ave., New York, N. Y.

Kalart Synchro-Sunlight Picture Contest

One hundred dollars free prize contest open to amateurs and professionals is announced in the advertising section of this issue by the Kalart Company. This company will pay \$50 first prize, \$25 second prize and five additional prizes of \$5 each for the best Synchro-Sunlight photographs submitted by September 1, 1937.

Photographers all over the country are getting novel lighting effects outdoors with this new technique. Posters and descriptive folders at dealers give complete instructions. The folder, "Synchro-Sunlight Photography," telling how to take these beautiful outdoor pictures, can also be obtained direct from the Kalart

Company. 56 Warren Street, New York, N. Y.

Prints Wanted for New Book

Greenberg: Publisher invites all photographers to submit prints for publication in their new book to appear this fall, "The Form Divine." In order to encourage photographers to enter their best nude studies, the publisher has announced that every contributor will receive a regular author's

royalty contract, which will enable them to share proportionately in the profits of the book, although every contributor is to receive a guaranteed minimum of \$10.00 for each print accepted. All prints will be protected by copyright and the publisher requires only book reproduction rights. Send to Greenberg: Publisher, 67 West 44th St., New York, N. Y., for further details. Closing date, June 15th.

Our Book Shelves

Picturing Miracles of Plant and Animal Life, by Arthur C. Pillsbury. Published by the J. B. Lippincott Company, Philadelphia. 236 pages, 66 illustrations, cloth bound, price \$3.00.

In this, his first book, Arthur C. Pillsbury of Berkeley, Calif., has described in an interesting, light style his work in Lapse-Time Photography, Microscopic Motion Photography, X-Ray Motion Pictures, and Under-Sea Photography. It is unfortunate from the point of view of the advanced worker that the book is written so as to have a very general appeal to the layman, the amateur microscopist and photographer, as well as to the botanist and zoologist. While some pertinent information is given as to the construction of apparatus and set-ups, it is not nearly enough detailed to help the serious worker in the fields covered by the book. The high prices mentioned for equipment, would be very apt to discourage the serious beginner, particularly when the old scheme of connecting two compound microscopes together is given great prominence, adding greatly to the expense with results of questionable value.

While some of the photographic illustrations are good, a good many are disappointing, and we would like to have seen at least one illustration in color. The chapter on Technicolor and other color methods is the best one in the book, giving some very excellent information on Kodachrome film. The book should have its widest appeal to Pillsbury's many followers who wish to know more about how his films are made.

Portrait Photography, by Franz Fiedler.

Published by the American Photographic Publishing Co., of Boston. 198 pages, 7 x 10", cloth bound, price \$3.00.

This is a thorough, exhaustive work on modern portrait photography which offers a complete review of portrait methods, hundreds of lighting setups, and a new approach or working basis. Mr. Fiedler contends that modern portraiture should not only be a "document of indisputable truth to nature", but also should portray the character and personality of the subject. His chapter on Physiognomy indicates the physical features by which the photographer can recognize and classify the character and personality of his sitter. Throughout the book, the author has applied these principles in his examples to bring out the character of his subjects.

The book contains 318 illustrations and diagrams and is a work of real value to every serious student of this subject.

Photo-Kinks, the Photographer's Handy Book, by Stanley Carlson and Harvey Goldstein. Published by the Huddle Publishing Co., 403 Loeb Arcade, Minneapolis, Minn. 64 pages, paper bound, price 25c.

This is a useful little handbook covering a wide range of photographic do's and don'ts. The book is prepared in a series of short practical notes in unrelated order but brought together for easy reference by an index. The notes give facts which are usually learned only by costly experience and PHOTO-KINKS will show you the way around mistakes and also the way to many new interests in photography.

CAMERA CRAFT



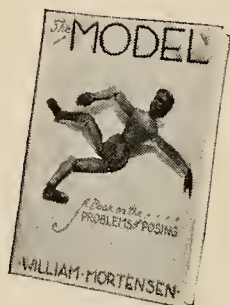
"Alte Bauernfrau"

Ferencz Naar, Hungary

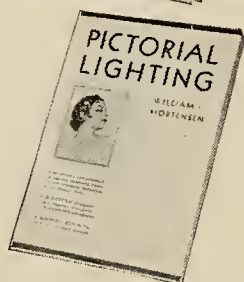
1st San Francisco International Invitational Salon

1937	PRICE 25c
PRESSION ISLAND.	Will Connell
EXPERIMENTS	Fred G. Korh
OSPHERIC QUALITY	William S. Davis

A MORTENSEN LIBRARY



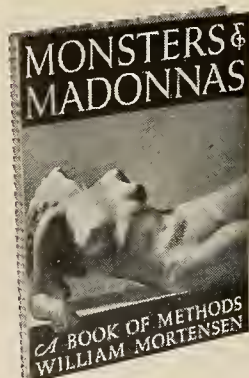
THE MODEL, A Book on the Problems of Posing, is a thoroughly complete treatise on the posing and directing of models. The problems connected with the posing of every part of the figure are exhaustively studied and finally brought together for the completed pose. 272 pages and 268 especially prepared illustrations. The greatest book value ever at **\$3.00**



PICTORIAL LIGHTING will simplify your lighting problems in two important ways. **Simplified in execution**, the author explains clearly and simply just how his famous lightings may be obtained. **Simplified by great reductions in cost**, for only two inexpensive lighting units are used that are well within the means of the most modest purse. Profusely illustrated, with diagrams giving exact measurements for lighting set-ups..... **\$2.00**



PROJECTION CONTROL, is concerned primarily with describing the four methods the author uses to control the image during projection: framing, local printing and "dodging in," alteration or distortion, and combination printing and montage. They enable the photographer to greatly enhance the pictorial effectiveness of his pictures. Also invaluable sections on equipment, exposure and developing technique..... **\$1.75**



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"Sandra"

Dorothy Wilding

1st San Francisco International Invitational Salon

Depression Island

Will Connell

The remarkable series of forty-nine pictures which are briefly described in this article have recently appeared in book form under the title "In Pictures." Published by T. J. Maloney, Inc., of New York, price \$3.50.—Ed.

IN the early 30's, along with the other 119,999,999 people in these depression laden states, I felt the need to "hole-up" until the storm blew over. There being no other hospitable shore on my horizon it seemed like a swell idea to lay my languid carcass under the sheltering palms of some work—even if that work had to be manufactured.

Casting about for that subject on which I had the most to say, and also for one which by its publicity value would give me the greatest return for my effort, I picked the motion picture industry. Grabbing my rusty trifle I rushed out to shoot me forty pictures. As the proofs of the first four or five stacked up it was apparent that like Stephen Leacock's "perfect English gentlemen," I was riding madly off in all directions. Whereupon, I sat me down with pencil and paper to map out the course to my depression island.

This became very shortly a matter of thumbnail sketches in which I not only attempted to pick the most revealing moment of each particular phase to be covered, but also the best layout or composition that I could make of it. Some four hundred little thumbnails were made and three months of my "exile" so spent. However, I *was* ready to start shooting and during the next three months thirty-three of the group were made. These were shown in Paris at the height of the dollar devaluation and the war scare of 1933. Strange as it may seem, these two events completely dwarfed the magnitude of my one man show. Also, overhead sort of goes on, and on, and I found that the thirty-three prints had cost on an average of twenty-three dollars apiece, not counting my time—and the depression still not over.



"Editing"

Will Connell



"Supervisor"

Will Connell

This "news from home" disrupted proceedings considerably and I turned more and more to the use of friends and acquaintances for models and towards simpler sets, which usually meant closer-ups. I had already found that even with the casting files of Hollywood available that some of the casting had to be done from real life, but the potentialities of my friends and relations was certainly a major revelation.



"Movie Mamma"

Will Connell



"My Dear Public"

Will Connell



"Censorship"

Will Connell



Print from the negatives used in printing "Premiere," shown on facing page.

For instance, in the picture entitled "Censorship," one is the mother of a friend; one the actress who played the mother in the Los Angeles production of "Abie's Irish Rose"; the man is a barber, inadvertently stumbled across on Santa Monica Boulevard; one is a professional woman of considerable standing in the town; and the priceless little body down front is an aunt of my wife's who, a club woman and D. A. R. of Buffalo, had come west to see what kind of a mess her favorite niece had gotten into by marrying a photographer. God certainly had delivered her into my hands at just the right minute and the party was hastily put together at the Ritz Theater which was rented for the morning.

In "Melodrama": the gentleman now is the suave corner realtor with somewhere in his past a ten-twenty-thirt period for leavening. A plug hat, a phony moustache and a penny stick of licorice to blacken his teeth really, I think, did quite wrong by our Nell.

I musn't forget to acknowledge the workings of the law of averages and the fact that photographers are not excluded from its beneficent functionings. Starting out with a perfectly good idea (and diagrammed) of how I wanted to shoot the cutter in "editing" and working my fool camera off its tracks in the effort—all of a sudden there's a much better picture all set up for me. Gives it pause to wonder how many other swell shots I didn't have the sense to recognize when I saw them! Sometimes the bright light of an idea works for hypnosis.

Then, too, there were intangible things to portray—say, "Supervisor": Otto, the "line" on my little team, turned the frustrations of a born saxophone player to the problem and produced a glorified worm by stringing pearl (need I say, artificial!) beads on a piece of wire and dipping the whole in paraffin; after which, with loving care, he dabbed other bits of paraffin on for legs and nose. The discoloration around the worm-hole is ink.

"Career" cost more time and trouble in its casting than any other picture in the book. I went around for days looking at men's hands and finally called on the service of two casting offices in order to get a greasy,



"Premiere"

Will Connell



Straight prints of the elements used for "Producer." The center picture shows the male figure without lateral distortion.

pudgy paw with horizontal nails. Here, as in so many other of the phases I attempted to portray, the actuality of the thing is much more devastating than any wise-crack could possibly be.

To point up this statement: take a look at the faces in "My dear public"—no one would dare so cast the scene. The cell-block of writers' cubicles in "Literature" is much too true to be funny; and it would have been sacrilegious to do *anything* but the most faithful and Holbeinish thing possible with so marvelous an authenticity as the "Movie Mamma."

Such satire and wit as the series may possess very probably comes from the fact that I had no greater wit than to try my damndest to record the thing before me.

Epilogue (at request of the Editor): Here is shown a breakdown of the sandwich used in printing "Premiere." The theater background negative and the negative of the shirt and larger light were laid together on the retouching desk and the unwanted parts of the background shot erased with knife and abrasive. In the same way the edge of the small light was removed. The use of this small light was necessitated by design requirements. In printing the four negatives are laid together in register between glass. The microphone (like the other foreground negatives also shot against a black ground) is allowed to overprint for the montage effect.

As in the regular pattern of motion picture production some of the last shots in the series were taken first—hence the use of a nowadays antiquated "mike." Back in '32, when this picture was taken, the use of this type was perfectly okeh.

The "Producer," on the other hand, is a straight composite, or paste-together. The only trick involved is the lateral distortion of the man's back which was done with a prism. Herewith reproductions of the original negatives: the background, the straight shot of the desk and girl and the distorted shot of the man. The chair was a specially made up child's size desk chair to enhance the size and grossness of the man by contrast.



"Producer"

Will Connell



"Career"

Will Connell

Experimenting

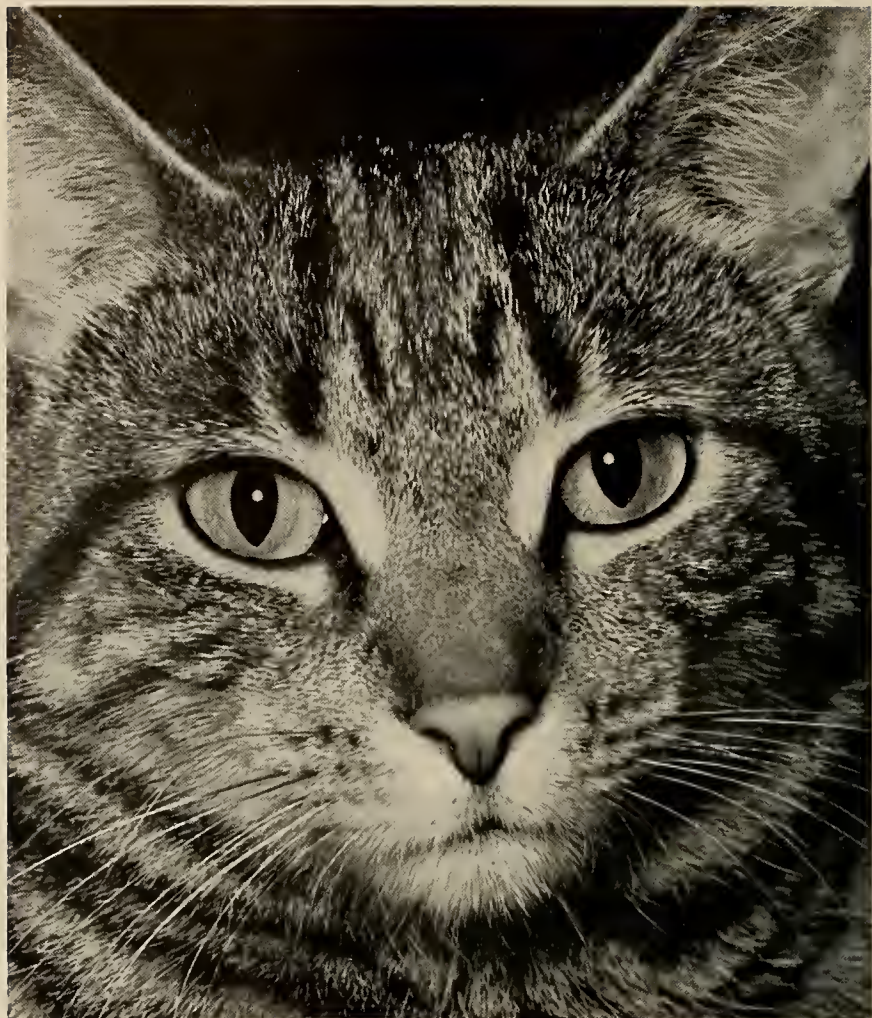
With Film

Fred G. Korth

IT IS probably true that most people prefer clear and sharp enlargements of good photographs to soft bromoil transfers, gum prints, prints from paper negatives and the like, although it must be admitted that thousands of pictures of the latter "worked-up" type are so well executed that they will earn the praise of any open-minded observer. These so-called control processes have an advantage over straight printing and projection in that they can lead to good prints even though the negative would never satisfy for straight enlargement. There was a widespread notion for awhile that no picture is good that is not suited to the paper negative process. Nowadays more workers are discarding that idea, and many of the younger amateur and professional photographers will never play with anything but a straight enlarging process.

Glancing through photographic annuals we often discover sharp pictures the value of which, apparently, have been effectively changed in one way or another. Eliminating prints of high or low key, we want to discuss here a few of the more common alterations that can be made without deviating greatly from the straight process and sharp pictures. For this purpose the writer started off with a straight positive print of a cat's portrait. No retouching was employed in any of the subsequent processes.

The second reproduction is a negative print made from a film positive in the enlarger. A simple method of obtaining a good film positive is to put a sheet of anti-halation commercial film in contact with the original negative in a printing frame. The frame must then be placed pretty far away from the source of white light and a short exposure given because even commercial film is considerably faster than bromide paper. All of this work should be done in total darkness or in the red safelight of the dark-room. The exposed commercial film should be immediately developed. Depending upon the contrast in the original negative, the positive film can be made to correct faults. If the negative was too contrasty, the positive may be exposed rather fully and developed shortly in a soft developer. In the case of a soft negative, the positive should get but a short exposure and a long development in a contrasty developer.



Straight Print

Fred G. Korth

Our third illustration is half positive and half negative. After finding the right exposure and development for the film positive as described in the last paragraph, we might as well make two more positives. When these are fixed, washed and dried, one of them is put into the printing frame and we proceed to make two negatives from it in exactly the same manner in which the positives were made. Again, anti-halation commercial film is recommended for the purpose. Commercial ortho, as well as the faster orthochromatic and panchromatic emulsions of the various kinds may, of course, be used in an emergency but their speed in connection with their higher sensitivity to safelights of any color will help to make the work unnecessarily difficult.



Negative Print



Half negative—half positive

With a good film positive and a good film negative of equal density in hand, we soak both in water for ten minutes. During this time the stock solutions for Farmer's reducer are prepared:

Solution A		Solution B	
Pot. Ferricyanide	1¼ oz.	Hypo	8 oz.
Water	16 oz.	Water	32 oz.

We mix one ounce of Solution A with four ounces of Solution B and add no water to this contrary to the usual formula for the slow, overall reduction of negatives. Depending on the size of the image on the films, either a tuft of cotton or a brush is now used to reduce half of the positive and the corresponding other half of the negative down to clear film. Both being wet and constantly in running water, we can easily put the two films in contact to check the progress of the work. As soon as the reducer begins to slow down or fails to work altogether, it should be discarded for a new solution. In the case of the cat picture the line of reduction was not sharp, but the image was gradually fading. This caused the final print also to show a gradual change of image from positive to negative. If for some reason a sudden change from positive to negative is desired, the film should first be etched when dry with an etching knife to the extent of at least ¼ inch. The rest may then be bleached out with the reducer in the manner described above.

After half of each image has been reduced down to clear base, both films may be put into the remaining Solution B of hypo with water. In about five minutes all stains caused by the concentrated reducer will have cleared out and the films may then get their final washing in running water. When dry, positive and negative are juxtaposed and bound to each other



Negative and positive combined



Solarization

by adhesive tape along the edge. They are then ready for printing in the enlarger.

The fourth illustration shows the familiar relief process. For this, we simply put one film positive in contact with a film negative. In this case both were of equal contrast and density. A number of different effects may be obtained by having the negative or positive dominate in contrast or density. Starting out with the images exactly covering each other, we then move one slightly out of register until we see a pleasing effect. The films are then held firmly together by tape along the margin. For real fine lines as in a sharp photograph of fur, the positive and negative images should, of course, be moved very little out of register. However, in the case of a similar close-up of a human face or any photograph depicting broader surfaces, positive and negative images might well be separated a little further. In printing from such a combination of positive and negative, the effect may again be changed considerably by selecting a high or low key.

The fifth print reproduced here is made from a solarized negative. For both prints of the relief and solarization processes, a fast enlarger is needed in combination with a fast enlarging paper. Rather contrasty emulsions can often be employed for good results. When no fast enlarger is available long exposures may be quite successful. To save the film from ruin by heat, we should either install heat filtering glass in the lamp house about one inch above the ground glass or the condensers, or we should expose the paper with interruptions. An exposure of one minute is probably safe in any enlarger on the market today. If very long exposures are required, the enlarger should alternately be switched on and off for periods of one minute each until enough light has passed the lens. The off-periods will serve to cool the lamp house and the negative sufficiently to prevent damage.

Adding Atmospheric Quality

By Photographic Means

William S. Davis

LACK of atmospheric effect or sense of space between near and distant parts of the subject is not infrequently a cause of unsatisfactory rendition in photographs. If this is due to local conditions prevailing at the moment, no doubt the ideal way of correcting the fault is to make another exposure when the state of the atmosphere is more favorable to getting good results. Unfortunately, however, it is often impossible to do this, either for personal reasons or because the transitory grouping of objects renders duplication of the composition out of the question. Hence, any improvement in the image must be effected by some form of local modification.

Methods of hand-work on negative or print, if skillfully applied, sometimes produce the required change of effect, but there is always the danger of modified parts not matching-up with the definition and textural character of the lens-image. Moreover, purists naturally object to a mixture of photography and hand retouching on the ground that the result is a hybrid product. Objection cannot reasonably be made, however, to the local control of tones by superimposition of one photographic image over another, and it so happens that this method of treatment gives in certain cases results practically unattainable by any other means. Though not new, such method of local control does not seem to be as well known and frequently employed as it deserves to be.

In brief, the technique consists in making a *very weak* positive image by contact printing on a moderately slow plate or cut-film, clearing away by local reduction all parts not needed for corrective purposes and, after the usual washing and drying, binding the positive and negative together with the images in registration. When a print is made from this composite, the parts that include the thin positive image are, of course, lighter in tone than they otherwise would be, the degree of change depending upon the light retarding strength of the positive. An important point to note in connection with such change in tone—one that sets this method apart from the usual methods of altering tones in a considerable area—is the



Fig. 2

reduction in contrast in the portion affected, when detail is involved, due to the positive partly neutralizing contrasts in the negative image. In fact, it is possible, theoretically at least, to so adjust the strength of the positive as to secure complete neutralization, thus converting the image into a flat expanse of uniform tone.

The power to flatten contrast, as well as lessen the depth of tone, is especially important when one wishes to accentuate atmospheric quality in an outdoor subject, since the natural action of haze or mist is not merely to make distant objects appear lighter, but flatter in contrast as well. One has only to observe two objects of similar character, one near and the other at a considerable distance, to see how much flatter in tone the latter appears as compared with the contrasts in the near object, the difference being due mainly to the lesser depth of the dark parts.

Bearing in mind the natural action of the atmosphere, it is obvious a weak positive image imposed upon those portions of the negative representing the distant planes of the subject can be made to produce an effect which corresponds closely with that produced by mist in the air when photographing a scene.

How such modification works out in practice is shown in our illustrations. Figure 1 represents a straight print from the original negative, wherein water, ferryboat and shoreline appear to lie in practically one plane. Figure 2 conveys an idea of how the modifying positive transparency appears after the unwanted parts were cleared away by local reduction. Figure 3, entitled "A Manhattan Ferry," shows a finished enlargement from the locally altered negative. While some fine points may be lost in reproduction, the differentiation between the boat and shoreline is very marked in the print itself, with a corresponding gain in atmospheric quality.



Fig. 1



"A Manhattan Ferry"

Wm. S. Davis

Fig. 3

Positives may be used for other purposes, such as lessening general contrasts in a harsh negative, altering the tone of a background in a portrait, etc.

In conclusion, a few technical details as to manipulation may be useful.

As a very thin positive is usually sufficient, exposure is best kept on the short side, and a diluted developer used.

A medium speed plate or film, such as the so-called "commercial" type, is generally suitable. Glass positives are easier to register than film, because of their rigid base. This is especially true when the negative is on film.

Registration of the two images is accomplished by bringing them face to face and gently moving about until no doubling effect can be seen. Positive and negative should then be held by a couple of spring-clips while narrow strips of gummed binding are applied around the edges.

"Farmer's reducer"*—hypo and potass. ferricyanide—is good for removing such portions of the image as are not required. The positive, after fixation and a short rinsing, is surface dried with absorbent cotton or a blotter and the reducer painted on the smaller parts with a camel's hair quill-set brush. Larger areas may be cleared by using a mop of cotton. Wash and dry as usual.

An alternative way of securing blank areas in the transparency in those parts where no change is called for, is to mask out such places on the negative before making the positive. Paper masks or a coating of soluble opaque water-color may be employed, according to needs, such protection being later removed.

*See page 319 for formula for stock solutions.

Successful Wild-Life Photography

Alan C. McKean

MOST snap-shot fans may not care to use detailed plans when taking pictures, due to the fact that so much of their pleasure comes from the impetuosity and spontaneity common to the sport. But for the more serious-minded, some sort of plan should be worked out which will at least lay the foundation for successful wild-life photography. Consciously, or otherwise, everyone who makes an exposure thinks of his focus, etc., even the simplest snap-shot requiring him to find sufficient illumination, and to center his subject in the view finder.



Alan C. McKean

Young Barn Owl in a dramatic posture. This subject is an easy target for the beginner. Chief problem is illumination.

Wild-life photography is more difficult than most types because of the elusiveness of the subject; hence, to save much time and trouble, preliminary planning should be undertaken. With some of the more common birds and animals (for instance, gulls trailing ferry boats, or tame deer in parks), comparatively little data need be secured. For the wilder game, however, a knowledge of life habits becomes necessary; to neglect such details is to set out but half prepared.

A data form has been developed from experience, and, when a subject has been selected and the information filled in, may well serve the nature photographer's needs. Filed, these data sheets provide a speedy, authentic record for future use.

The procedure is as simple as it is important. For example, say we live in San Francisco and do not know much about the game we wish to photograph: our first step will be a trip to the public library. Hoboken, New Orleans, Seattle—it doesn't make any difference, all have libraries. And the species of game we choose to pursue has little bearing on our method of filling out our chart. In this case, the quail has been selected because, here in California, it is an interesting species of wild life, common enough to assure success in finding. Partridge, moose, deer in the East; bob-white, opossum, raccoon in the South; pheasant, bear, porcupine in the Northwest—these and dozens of other fascinating animals make up your game list. In every section of our country, some type of wild life is

abundant; so choose your subject accordingly. An hour or two with reference books on a chosen species and we should emerge with data comparable to the following, remembering, of course, that your selection may be "Barn Owl," of residence universal, instead of my "Quail," of residence California.

Appended is a short list of books which may be consulted for range, color, habitat, and nesting; also other sources of information. Most of these books have drawings and descriptions, making identification quite easy.

DATA SHEET

Ref.: Wild-Life.

Subject: California Quail (*Lophortyx californica*).

Locality: foothills, fringes of valleys, watersheds throughout California.

Season Found: all year.

Period Most Active: mating and nesting, February to June. The young and adults gather into conveys in early Fall.

Daily Activity: early morning, late afternoon, most active.

Feeding Hours: early morning, late afternoon; sparsely during whole day.

Resting Hours: rest from 10 a. m. to 4 p. m. (approximately); roost from dusk to dawn.

Abundance: abundant only in certain localities — Spring Valley, Golden Gate Park, Point Loma, etc. (check with the local game warden if data is not available in library).

Type of Cover Frequented: ravines, brush and clearings near brush, roost in brush or small trees; marginal lands.

Nests: usually under brush or under grass hammocks in field and orchard; seldom off of ground.

Blind Needed: brush, or brush and canvas. Quail will get used to nearly any blind if not frightened badly.

Approach Permitted: sometimes within a few inches if the nesting bird thinks she is undiscovered. On the average, will flush when approached as closely as ten to twenty yards; the covey may run and hide. If the photographer is well hidden, the quail may work right up to his feet.

Type Lens Needed: a fast lens of normal focal length will do for action, nesting, dust baths, and feeding shots, but a telephoto or long focus lens is a very desirable piece of equipment.

Type Film: Super-Speed Panchromatic.

Type Camera: any having ground glass focussing and good finder.

Accessories: ray filter, lens hood, dark cloth for camera shield, strong thread, cord, knife, few medium screw-eyes, exposure meter, plenty of film, tripod, small grains for feed.

Notes: The light is poorest in the period of greatest activity, so the early hours are best utilized by determining the direction of quail travel and setting up the camera carefully (this statement is true for nearly all wild life). The color of quail is drab, making a light background desirable for best rendition (grass, sand, stream bottoms and banks, open ground). Setting hens will desert their nests if badly frightened; pass on and watch until she goes off to feed. Consistent baiting is worthwhile.



Alan C. McKean

Young Long-Eared Owl, San Diego County. This young bird evidently fell out of the make-shift nest in nearby tree, and was unable to fly back up to it.

For information on local abundance of game and directions for reaching game areas, contact the local game warden, zoological society, bird club (Cooper, Audubon, etc.), natural history department of a university or museum. Boy Scout organizations generally have some qualified person who examines the Scouts in their merit badge tests, someone familiar with all the local bird life.

In closing, let me suggest that patience and energy are the virtues required above all others for wild-life photography, but a successful "bag" gives just as much pleasure to the photographer as does the catch to the fisherman or the kill to the hunter. And no one need remind an enthusiastic camerist of the lift of elation when at last he sees his reward slowly, but surely form before his eyes.

Appendix

Handbook of Birds of Western U. S. By F. M. Bailey.

Birds of the Pacific States. R. Hoffman.

Field Books of North American Mammals. H. E. Anthony.

Reptiles of the World. R. L. Ditmars.

Common Birds of Town and Country.

Birds of Northeastern U. S., and many pamphlets published by the U. S. Department of Agriculture. Send for a free list of these; most of them are available at no cost.

The San Francisco Invitational Salon

Horace Bristol

A Minority Report

THE Salon was a success, no doubt of that. It was thoughtfully planned, ably executed, and, for the most part, excellently displayed. Good publicity and critical reception were given it, lecturers talked of it, satisfactory numbers attended.

The Salon was a success, and unstinted credit is due the sponsors and members of the committee who planned and made the show possible.

But now that it is over and plans are under way to make the Salon an annual affair, it might be well to consider what success means, in this instance.

In short, did the three hundred fifty-four contributors to the show justify its existence? Did the prints on the walls, as a group, display the breadth of purpose to be expected of the world's outstanding photographers? Were the masterpieces of this year, or any year, revealed to make this "one of the finest collections of photographs ever shown?"

The question is preposterous, on the face of it.

And who is to blame. Was it the fault of a dyspeptic jury who threw out the best prints?—There was no jury.

Each exhibitor sent his choice of the work he wished to represent him; included in the list were actually some of the biggest names in the photographic world.

There was no rush, no confusion—not even an entrance fee, yet the show was enough to cause the serious worker to ponder a question that must have been upper-most in the minds of hundreds who attended, for it appears in even the favorable reviews written for the daily papers. That question is "if this is photography—what of it?"



"Leonard Stark"

Horace Bristol

The mountain laboring to bring forth a mouse. Not even a live mouse, at that.

One of the features that made the Salon noteworthy in a material sense exposed the absence of a general photographic concept. Arranged as it was, by national divisions, the prints disclosed that no school, no political group or faction shared a common purpose, and the individual with a really worthwhile representation was the exception in any division.

*Nor can much praise be given one group over another, unless it be mentioned in passing that some of the Balkan countries have a common facility with the use of light—but without much excuse. It might be said, with perfect justification, that the American contribution to the show, except in number, was the most disappointing—perhaps because it should have been the best. We as a group and as individuals, have the technique, the experience—and (for this we can be thankful) the majority of those exhibiting from this country have grown past the desire to play with processes merely because they are difficult.

Still, who would be willing to say of the San Francisco show—"this is American photography, and I'm damn proud of it?" If it is, then there is still time to take up street sweeping.

From its relation to contemporary life, the show might have been dated 1927, 1907, or 1887, if we are to judge by the prints handed down from that time. No, that is wrong. In 1887, before roll film and miniature cameras had started the world "knipsing," the standards of photographic requirements were higher. Equipment was bigger, heavier, more expensive, which tended to discourage all but the serious worker, even if wet plates didn't. As a result, the photographer thought a moment before he snapped the shutter.

Today there is no time for any of that thinking nonsense. We can capture the infinitesimal part of a second without thought, so why think?

What is the result? The First Annual San Francisco Invitational Salon of International Photography.

Where are the examples of the exquisite beauty scientific workers have found in macro-photography; where are the spot-news photos that make photography a living thing; or the functional uses of the medium in industry and design.

The United States produces them—yes, some of the best. What is there about the word "salon" which brings out the worst in the photographer? Perhaps it is that no one print, however good, can represent the whole of a man's life; the very thought of choosing this print above all others may frighten him into sending what he considers the most popular, or appealing to the general public. Maybe the contributor has a reputation to uphold, and any print must be judged in that light. If this is the charitable explanation, let the "Second San Francisco Invitational Salon of International Photography" be limited to those who have never exhibited in any show, or submit the next show to the public without distinguishing one photographer from the next.

At any rate, whoever the contributors, however they are chosen, may their work next year save the show from empty success.



"Cacti"

W. M. Tillery

20th Los Angeles International Salon

Adjustable Horizontal Easel

For Vertical Projection

Barton Bachmann

THE user of vertical projection apparatus occasionally finds himself hampered by the difficulty of securing sufficient distance between the lens and the surface of the sensitive paper. Such instruments are usually bolted, or otherwise securely attached to a work-bench or table, upon the top of which the image is projected. The support or track upon which the camera may be raised or lowered is, of course, limited in length; and it sometimes happens—as when, for example, making an 11 by 14 print from a small portion of a $3\frac{1}{4}$ by $4\frac{1}{4}$ negative—that the camera simply cannot be raised far enough from the table-top to accomplish the desired purpose. If the ceiling of the work-room is rather low, this difficulty is aggravated.

To obviate it, a horizontal easel, or paper holder, adjustable for height, may be simply and cheaply constructed, and will be found of great assistance and untold convenience. (See illustration 1.) All that is necessary is a bit of lumber, a few tools, and a little handiness in using them.

The easel consists essentially of two parts: (a) an upright post with supporting base, or feet; and (b) a sliding sleeve, from which projects a horizontal arm supporting the plate or bed upon which rests the paper. This is firmly held at any desired height by the friction of the sleeve upon the post, and may be instantaneously adjusted merely by pushing it down or pulling it up. (See illustration 2.)

The materials are as follows: Ten feet of surfaced 2 by 4, in some smooth, straight-grained wood, preferably a wood that is not too splintery, from which to cut the upright post and supporting feet, the front-piece of the sliding sleeve, the supporting arm and the diagonal support. The use of pieces of this dimension for these parts will insure rigidity and firmness. For the side-pieces of the sleeve, two pieces of $\frac{3}{8}$ -inch plywood, each 5 by 12 inches, will be needed; and for the back of the sleeve, a piece of $\frac{3}{4}$ -inch board, 4 by 12 inches. Finally, for the plate, or bed, to hold the paper, a piece of $\frac{3}{8}$ -inch plywood, 18 by 22 inches, should be procured. Add to this about a dozen and a half screws, $1\frac{1}{4}$ inches long, a few 3-inch screws, and some glue.



Fig. 1



Fig. 2



Fig. 3

The required tools are simple, and likely to be found in any household, viz.: a plane, a chisel, a saw, a try-square, a drill or gimlet, a countersink bit, for sinking the heads of the screws, a screw-driver, possibly a wood-rasp, and some sandpaper of various grades for smoothing up the wood.

The vertical post and base should first be constructed. Cut a piece of the 2 by 4, 36 inches in length; smooth it, with the plane, and then sandpaper, making sure that the thickness and the width are *exactly* the same throughout its length. Then cut in one end of it an open mortise, 1-inch wide, and of a depth equal to the width of the surfaced 2 by 4 material (see diagram 1, a). Attention should here be called to the fact that such 2 by 4 material when surfaced, does not measure 2 by 4 inches, since the surfacing necessarily removes some of the wood. Subsequent smoothing with the plane will still further reduce the dimensions, so that the material when ready for jointing and fitting will very likely be about $1\frac{5}{8}$ and $3\frac{5}{8}$ inches in actual thickness and width; and this should be taken into account when cutting the joints.

Next cut a piece of the 2 by 4, 18 inches in length, for the foot. This should be smoothed with the plane, and a tenon cut in one end of it to fit the open mortise in the upright post (see diagram 1, b). This joint should then be carefully fitted together and glued, using the try-square to make sure that the angle between the post and the foot is exactly a right angle.

Then, for the cross piece of the base, cut a piece of the 2 by 4, 24 inches in length. After smoothing, a halved joint should be cut in it, $\frac{1}{2}$ -inch deep, and of a width equal to the width of the smoothed and finished post (see diagram 1, c). Then the end of the post with the attached foot should be fitted into the halved joint on the cross piece and glued. A couple of 3-inch screws, through the cross piece from the back and into the post and foot, will help to draw the joint together. Reference to diagram 1 will do more than words to make clear these operations.

Next, cut out the supporting arm, 16 inches in length, from the 2 by 4 material, and after smoothing, cut an open mortise in one end of it, 1-inch wide, and of a depth equal to the thickness of the surfaced and smoothed

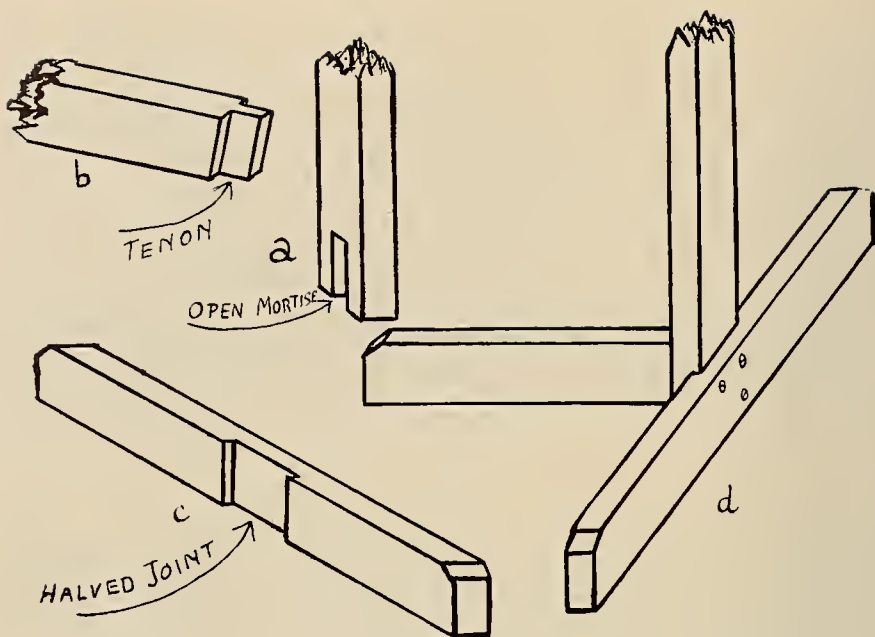


Diagram 1

2 by 4 material (see diagram 2, a). Then, for the front piece of the sliding sleeve, cut a piece of the 2 by 4 material, 12 inches in length, smooth it, and cut in one end of it a tenon to fit the mortise in the supporting arm (see diagram 2, b). This joint should then be fitted together and glued. In fitting this joint again use the try-square to make sure that the two pieces are exactly at right angles to each other. Then, for the diagonal brace, cut a piece of the 2 by 4, 12 inches in length, rip it in two, lengthwise, and trim and smooth one of the resulting pieces. Mitre the ends, i.e., cut them at an angle of 45 degrees, so that one end will fit snugly against the front surface of the front piece and the other end will rest against the under surface of the supporting arm. Fasten the brace in this position with a screw through each end, being careful not to disturb the right angularity of the front piece and supporting arm (see diagram 2, d).

For the side pieces of the sliding sleeve, the two pieces of $\frac{3}{8}$ -inch plywood are used. Attach them lengthwise to the front piece of the sleeve with screws, having the edges flush with that surface of the front piece from which the supporting arm projects. For the back piece of the sliding sleeve, use the $\frac{3}{4}$ -inch material, 12 inches in length; plane it to a width *very slightly* narrower than the width of the upright post—the purpose of this will be seen in a moment. Now place the sliding sleeve, with the supporting arm and side pieces attached, upon the upright post; next, place the back piece of the sliding sleeve in its proper position, so that it fits snugly as possible against the rear surface of the post, and while in this position, screw the side pieces to it, subsequently trimming off the rear edges of the side pieces flush with the surface of the back piece.

Now if the front piece has been carefully cut from material of *exactly*

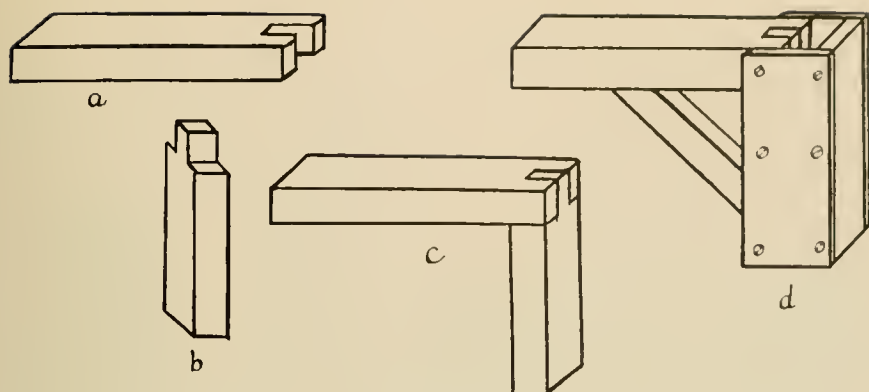


Diagram 2

the same width as the upright post and side pieces have been properly attached, the sleeve will fit the post snugly; and since the back piece is *slightly* narrower than the post, tightening the screws which fasten the side piece to it will cause the sleeve to pinch the post sufficiently so that friction alone will hold the sleeve securely at any desired position upon the post.

The 18 by 22 inch piece of $\frac{3}{8}$ -inch ply-wood should then be screwed to the supporting arm, to act as a support or bed for the paper, the screws being especially carefully countersunk so that the surface is smooth. The rear edge of the bed should be flush with the inner, or back surface of the front piece of the sleeve. A study of diagram 2 and of the illustrations will do much to make clear the construction and assembly of the sliding sleeve and supporting arm.

When finished, the apparatus should be carefully smoothed with fine sandpaper, and is then ready for use. The whole may be varnished, if urgently desired; but it would be wiser to omit this refinement, as the sleeve tends to slide more smoothly upon the natural wood surface of the post than upon a varnished surface.

In use, the easel should be set at one end of the work-bench or table upon which the projection apparatus is mounted. This, of course, should not be attached to the work-bench in the usual way, so that the image is projected on to the surface of the bench itself; but instead, so secured to one end—preferably the right—so that the image is projected out past the end of the table and on to the easel. If the work-bench or table is stout and solid, there need be no danger that the projection apparatus thus mounted will over-balance it. The sensitive paper may be laid directly on the bed itself, and held in place by weights; or a large printing frame or other device for holding the paper may be used. The bed of the easel, with its sliding sleeve, is moved up or down the post accordingly as a smaller or larger print is desired; and this mobility of both camera and easel greatly increases the convenience and flexibility of the whole apparatus.

The writer has designed and built such an easel for use with a vertical projector, and finds it a most useful and happy addition to his darkroom appliances.

Cinema Section

Edited by

William A. Palmer

Pictures Of Sound

THE narrow band placed along-side the picture of all modern sound films is a picture of sound waves. To many this seems very mysterious that such an intangible thing as sound can be recorded in the form of a photographic image on the same film that records the picture. There is no obvious connection between sound in the form that we can hear it and the form that it is transformed into on the film, and so to the non-technically minded person it seems like black magic. To the person working with talkies, however, the sound record is far from a mystery. In fact, when one studies the "sound tracks" (the common name for the pictures of sound) he is soon able to tell a good deal about the character and quality of the recorded sound just by looking at the variations that represent the sound waves. This is especially true with the type of sound track known as the variable area track. For example it is quite a simple matter to distinguish between voice and music recording just by the appearance of the "modulation" (variation in the sound track representing sound waves). Not only can voice be distinguished from music, but various syllables can be picked out.

The variable area track which is illustrated here appears something like the edge of a comb with different lengths and widths of teeth. Normally the track is half black and half clear, with the peaks of the "comb" teeth being as far above the center line as the valleys extend below the line. Actually the jiggles making the peaks and valleys are a graph of the movement of the diaphragm of the microphone which picked up the sound. When this sound track is played in a sound projector, the jiggles cause the diaphragm of the loudspeaker to vibrate in the same form, thus re-creating the sound. But leaving the method of producing a sound track for the engineers to understand, there are still many things about the appearance of the finished track that are very interesting once they are pointed out.

Learning to "Read" Sound

Making a general inspection of the "modulation" of a sound track, there are two characteristics that are at first apparent. The spacing of the little jiggles varies, some being very close together and others further apart. The film always runs through the recording and reproducing equipment at a uniform speed so it is easy to deduce that when the jiggles are very close together they represent very rapid vibrations, or in terms of sound a very high pitch. Likewise, of course, the jiggles that come further apart are sounds of low pitch. A piccolo note, then,

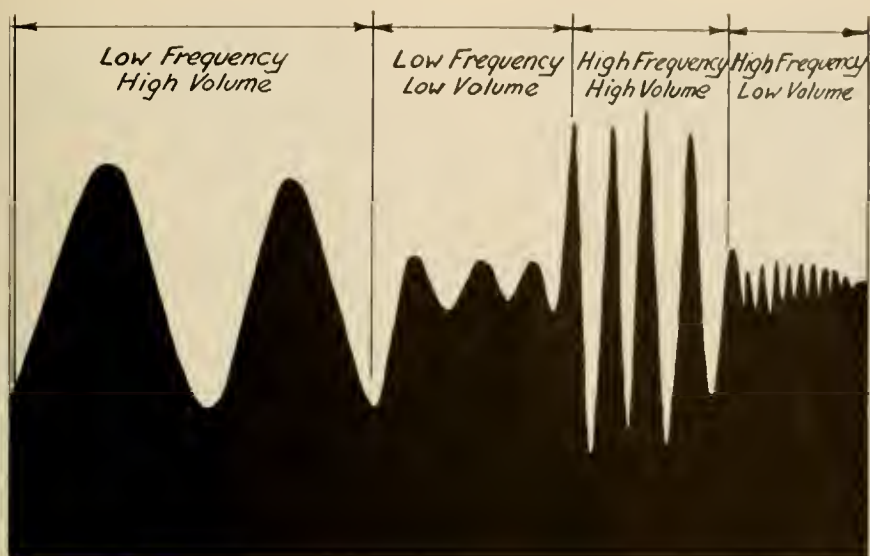


Fig. 1—Simplified Variable Area Sound Track

would show as fine, closely spaced jiggles while a bass viol would have them spaced further apart.

The other characteristics which we can readily notice is that all the sound modulations are not the same height. Some of them are large while others are just little squiggles. The height or extent of the individual peaks determine the amplitude or volume of the sound recording. The big jagged peaks represent loud sounds while the small ones represent soft sounds. When there are no modulations and the profile is a straight line, the track is silent. So already we can see how a sound track can be "read" to find something of its character. We can tell whether there are high or low pitched sounds (commonly called high and low frequencies) and whether the sounds are loud or soft.

In most cases there are more than just high and low frequencies of high and low amplitude. Ordinary sound records of speech and music have high and low frequencies occurring simultaneously giving a very complex combination of peaks and valleys. Yet no matter how complicated the sound being recorded, even if it be a full symphony orchestra, a political orator, and a factory whistle all going at the same time, there is some shape that the outline of the modulation can take which will represent all the sounds. That is really the miracle of sound recording, that a series of sound vibrations, so complex that no human mind could possibly analyze them, can be represented by a single profile of a series of peaks and valleys when the sounds are recorded by the sound recorder.

Every sound which differs from another will have an entirely different picture when it is recorded, and it happens that the pictures of music are so different from that of speech that it is no trick at all to distinguish between them. A sound track of speech is irregular and will have short stretches of high amplitude modulation alternating with stretches of silent track (no jiggles) and low amplitude high frequencies (little jiggles close together). Music recording is quite regular and, especially when sustained tones occur, has the appearance

of a border design with the same series of modulations appearing over and over again.

Being able to distinguish voice from music, high frequencies from low frequencies, and high volume from low volume is about as far as one can go in "reading" a sound track when he is unfamiliar with the exact type of speech or music that the recording contains. But studying recordings of known sounds there are many other things that can be picked out in the forms of hills and valleys. Every vowel sound, for example, has its own particular shape of modulation. (The term "wave form" is often used also to describe the shape of the pictures of sound.) Figure 2 shows a series of wave forms of various speech sounds. In the group of vowel sounds, the wave forms are rather similar in general appearance but differ in the details. It is these very few differences that make the vowels reproduce with their proper inflections. The consonants differ in appearance from the vowels in the larger amplitude where the explosive "b", "d", or "g" sounds occur. These are of short duration and usually blend into the vowel sounds which follow. The sibilant sounds such as "s" and "ch" are entirely different than the other speech sounds in appearance. As shown in figure 2 they are high frequencies and have relatively low amplitude.

Correcting Mistakes

Being able to distinguish between vowel sounds and sibilants has a very decided practical application for a film editor, for many times he can use the knowledge to correct a mistake in the sound track. For instance, suppose a person whose voice was being recorded stuttered while trying to pronounce the word "standard." Supposing that it was not possible to record the speech again, the film editor can easily correct the stutter by cutting out the first "st", since he knows the word "standard" will start with just one set of high frequency jiggles which will lead into typical vowel wave forms. The editor will not trust to his ability to "read" the sound track in order to pick out the word "standard" from a number of other words making up a sentence, but will use a machine known as a Sound Moviola in which the film can be threaded and played until the desired word is reproduced. The machine is operated by a foot pedal and is so made that it can be stopped instantly by releasing the foot pedal. Thus once the proper word is located, it is a simple matter to delete the offending "st".

Wave Forms of Music

The wave form of modulation of music on a sound track is characterized by repetition of little groups of peaks and valleys, each succeeding group being almost the same as the one before it. It is this regularity of sound vibrations that make music the pleasing sound that it is. Irregular sound vibrations are merely noises and more or less unpleasant to the ear.

The wave form of a recording of a full orchestra playing is very complex and while it is easy to see that there is a regularity here and there it is impossible to analyze it very much. However, if there is a recording of a single musical instrument playing a single sustained tone, a great many interesting things show up. By comparing the same note, say middle "C", played on several different kinds of instruments we can see in graphic form the reason for the different qualities (or timbre) of various instruments. The difference, for example, between a flute and a violin playing the same tone can be seen in the difference in the wave form. With some study the experienced sound engineer can pick out the various frequencies which make up what are known as harmonics.

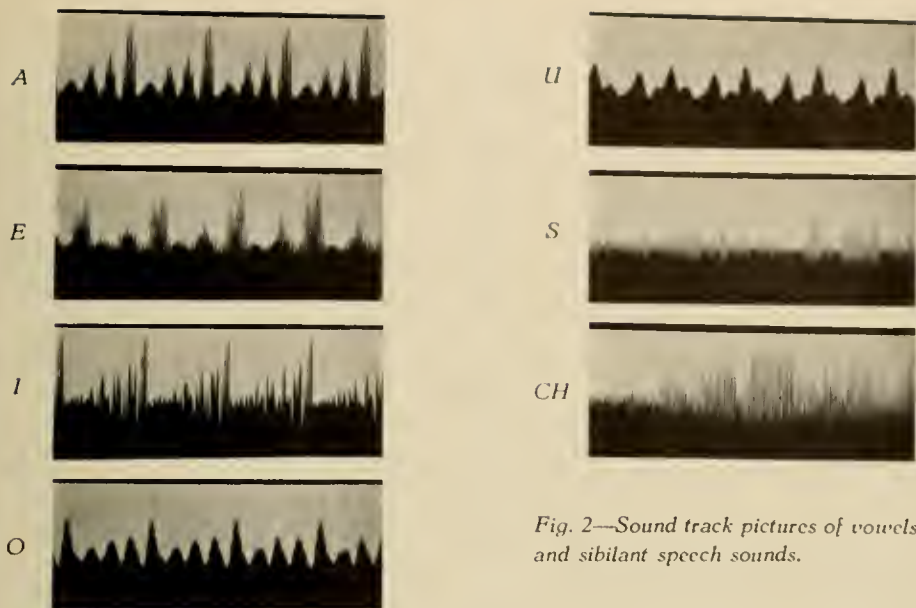


Fig. 2—Sound track pictures of vowels and sibilant speech sounds.

Middle "C" on any musical instrument has a wave form made up of vibrations of a very definite frequency (approximately 256 vibrations per second). This is a simple tone and is known as the *fundamental* or *first harmonic* and is the frequency that gives the tone its pitch. In addition to this fundamental tone there are other frequencies or harmonics (also called overtones) of higher frequency which determine the timbre of the musical note. The frequencies of these higher harmonics always bear a simple mathematical relation to the fundamental tone. The second harmonic is an octave higher than the fundamental and has just double the frequency. (The second harmonic of middle "C" is 2 times 256 or 512 vibrations per second). The third harmonic is just three times the fundamental, the fourth harmonic four times the fundamental and so forth. The relative intensity of these various harmonics determine the tone quality. For example a study of the sound records of a flute tone will show that there is a very strong fundamental tone and very few harmonics, giving the flute its mellow quality. On the other hand a violin tone has a weak fundamental tone and a great many harmonics, giving it the brilliant stringy tone that we know so well. The quality of tone changes with every change in the proportion of harmonics. An oboe gets its peculiar nasal tone because it has strong even harmonics. That is, the second, fourth, sixth and eighth harmonics are strong. The clarinet is just the opposite and gets its hollow tone by the fact that the odd harmonics (the third, fifth, seventh, etc.) are strong.

Fidelity of Reproduction

Since the character of the sound waves that are pictured on sound track is dependent upon the existence of many different frequencies, one can easily suppose that if any of these frequencies were eliminated the sound would become distorted. The high frequencies, having peaks and valleys very close together, are the easiest ones to become blotted out. A recording device to be ideal and record sound with perfect naturalness should be capable of picturing on the film

a very wide range of frequencies, hence the terms we see applied to the new, more perfected theater sound equipment and radios: "High Fidelity" and "Wide Range." Ideal frequency range would be from a low frequency of 20 vibrations per second (about the lowest audible sound such as the deepest organ pipes) to 20,000 vibrations per second. Many people cannot hear sounds higher pitched than about 10,000 vibrations per second, however, and the best of the modern "high fidelity" sound reproductions can carry that high. Sixteen millimeter sound film cannot successfully reproduce frequencies higher than 4,000 vibrations per second and therefore cannot give perfect fidelity. However, a range up to 4,000 is perfectly satisfactory for practical purposes, the speech being clear and understandable even though not perfectly natural in quality.

Almost more important than frequency response or range of a recording system is the mechanical motion of the film in the recording and reproducing machines. Sound is recorded upon and reproduced from the film as it is moved uniformly past an optical system. If this motion is not perfectly uniform and smooth, the reproduction will change pitch momentarily giving rise to a group of faults variously described as "whiskers," "flutter," "gargle," "wow," and "tone waver." All these peculiar terms from Hollywood are applied to different degrees of unsteadiness of film motion. In 16mm sound film the problem of uniform film motion is a great one. Sixteen millimeter film moves at the rate of 36 feet per minute, which compared to the standard theater film is very slow. At this speed, whenever the film slides over a fixed guide or shoe it does not move uniformly but in a series of little jerks due to the friction of the film against the stationary surface. As a consequence the film is made to run over a very free turning roller mounted in ball bearings and having a flywheel attached. In this way the friction is all in the ball bearings and is very slight whereas if the film is made to slide over a stationary surface, the friction is between the film and the surface, giving very poor sound quality.

The Present Status Of Amateur Talkies

THE field of amateur talkie production in 16mm film is not expanding very fast, in spite of the fact that there have been sound recording cameras on the market for several years.

There are two reasons for sound film failing to be used very generally. First is the fact that the equipment has been quite expensive until just recently. The minimum investment for a sound camera and projector was in the neighborhood of a thousand dollars. Now, however, prices are much less, it being possible to purchase a complete sound outfit for about five hundred dollars. The second reason that has held talkies back in the amateur field is the fact that the technique

is much more difficult and talkie scenes to be good require much more preparation than silents. This is a condition that will always exist and so the talkies are bound to be a matter for the advanced amateur and club groups rather than the snapshooting individual. For those who care to take the time and effort to make sound pictures, though, there is an inexhaustible field of picture possibilities far more interesting than the silents.

Of the 16mm sound cameras on the market, there are two general classifications. One is a strictly amateur outfit at a low price and the others are semi-professional and rather expensive.

Low priced sound cameras:

R.C.A. "Newsreel" type (for recording commentary only, does not record the sounds in the scene.

R.C.A. "Studio" model with microphone and amplifier.

—both sold by Bass Camera Co., Chicago, Ill.

Semi-professional sound cameras (usually \$1000 or more):

R.C.A. With commercial units supplied by the Bass Camera Co., Chicago, Ill.

Berndt-Maurer Camera, Berndt-Maurer Corp., New York.

Wall Sound Camera, Wall Machine Co., Syracuse, N. Y.

DeVry Sound Camera, H. A. DeVry, Chicago, Ill.

Questions and Answers

Question: Can the negative-positive process be used in 8 mm. film?

Answer: No. Not satisfactorily. There are many difficulties that would be encountered. There is no suitable negative stock on the market perforated for 8 mm., coarse grained images would be inevitable, and the loss of definition in the printing operation would all combine to make a sad looking picture. Dirt, the bugaboo of 16 mm. negative-positive work, would also be an insurmountable obstacle.

Question: Which is the best, a single or double 8 mm. camera?

Answer: There seems to be a good deal of confusion about "single" and "double" 8 mm. film and prospective purchasers are always wondering "which is the best." Actually it is not a question of one film system being better than the other, the operation of both types of camera being entirely satisfactory. The difference is entirely in the choice of films available in single and double 8 mm. The double 8 film is made by Eastman who offer the widest selection of emulsions. The single 8 films have an advantage of a little greater economy but there is no color film available in the single 8 size. The following is a comparison of costs per foot of the three types of black and white 8 mm. film: Eastman double 8 pan, 4.5c per foot; Filmopan (Agfa) single 8, 3.8c per foot; Univex Ortho single 8, 3c per foot. In deciding which type of camera to buy one must weigh the advantage of economy on one side with the increased scope of color on the other. All 8 mm. projectors will project any 8 mm. film, whether single or double, when run through the camera.



"Thread"

Ralph Rex, St. Louis, Mo.

Advanced Medal Print

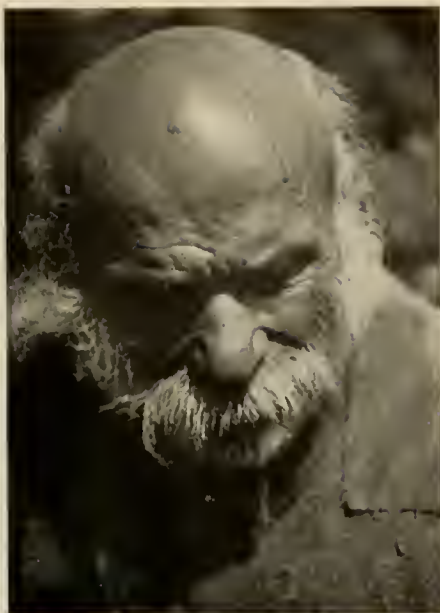
■Although put together out of rather commonplace materials this picture holds our attention quite successfully. It is not a picture which makes a strong first impression. In fact the judges had it placed fairly low in the group to begin with, but then kept moving it up until it finally landed in first place. Mr. Rex deserves full credit for making the most of his opportunities. The composition is exceptionally well thought out. The lighting has been arranged with fine discrimination, so that the attention is held within the borders of the picture and so that a most interesting variety of textures is presented. It would be very easy to completely spoil this picture by a small mistake in lighting. Imagine, for example, how the composition would be weakened if the ball of yarn were strongly illuminated at the point where it cuts the right edge of the print.

Data: $3\frac{1}{4} \times 4\frac{1}{4}$ Linhof Precision; 7" Goerz Dagor; 10 secs. at F:22, by photoflood light; Agfa Finopan in Buffered Borax; 8 x 10" print on Agfa Brovira in D-72.

Second Award
Advanced Class

■This appeals to us as an interesting head and the unusual viewpoint seems somehow appropriate when we consider that the subject is a blind man. We do feel that the picture would be more successful if made with greater depth of focus. It would help a lot to have sharp focus on the fringe of whiskers that border each side of the head. Greater depth of focus would also help to give some suggestion of form and solidity to the area in the lower left which now suggests emphereal emptiness. We don't need sharp focus there but simply enough definition to give an indication of form.

It may be useful to call attention to a small point concerning the lighting. Notice that the area below the eyebrow at the left side of the print is flat and unmodeled. Given the present lighting it could hardly be rendered otherwise. If, however, the head were turned just a little more toward the light a small spot of light would then catch the cheek and would do much to relieve what is now a slightly blank area. No data. Print size 11x14".



"The Blind"

*Toso Dabac
Zagreb, Jugoslavia*



"Cat"

*Fred G. Korth
Chicago, Ill.*

first impression cannot be maintained. To like to see more local color recorded in the would be somewhat reduced.

Data: 5 x 7" Deardorff camera; 27cm. Schneider Symmar; photoflash exposure at F:16, on Agfa Superpan Portrait film; 11 x 14" print on Illustrators Special.

JULY, 1937

Third Award

Advanced Class

■Mr. Korth's picture has a very strong initial impact, due to the tremendous brilliance of the eyes. We want our pictures to call attention to themselves, of course, but at the same time need to be careful to avoid having too much of a good thing. Just how much of such a quality is desirable obviously depends upon the purpose for which the picture is made. If we are making an advertising illustration (as Mr. Korth was probably doing in this case) the first impression, the power of the picture to command attention, is everything. This picture is very fine for that purpose. If, however, we are making a picture that is simply to be enjoyed as a picture, we must take care to have a more equitable balance of qualities. We must sacrifice some of the force of the initial impact for the sake of sustaining interest. That is, we must present our subject in more subtle fashion. When the initial impact is exceptionally strong the observer's interest is bound to fall off since the intensity of the speak specifically of this picture we would eyes, so that their present extreme brilliance

Fourth Award
Advanced Class



"Shadow Pattern"

*Glenn D. Beer
Los Angeles, Calif.*

■ Mr. Beer has seen an interesting pattern in this material and has photographed it quite well. There are two points which we would like to mention. It may not be entirely clear in the reproduction but in the print the light patch just above the broadest band of shadow is extremely bright. The brightness of this area is enhanced by contrast since it is outlined in dark tones. It should properly be recorded as the brightest tone in the picture since it is that part of the curved surface which is receiving the strongest light. As things stand, however, this area is virtually blank paper and we would like to have seen it printed down until the texture of the surface is shown. The material in the upper left corner is not really bad but we feel that the picture would be better if instead of the two pipes there had been a simpler band of medium tone that would carry into the upper left corner. This area now seems to call too much attention to itself and the simplification suggested (if it

were possible) would permit a greater concentration of interest. A narrow black border would help.

Data: 1/50th sec. at F:12.5; Agfa Superpan in D-76; 11 x 14" print on Agfa Brovira Rough White in Amidol.

Fifth Award
Advanced Class

■ This splendid picture by Mr. Alenius has been hung in a great many exhibitions and has been reproduced a number of times. That success is not hard to understand for the picture has many attractive qualities that will be evident to the observer. Some readers may not know how this peculiar twilight effect is achieved. All will realize that it would be impossible to get the amount of detail shown in the foreground with the light that would be available at the time of day shown. This difficulty is overcome by making two exposures. The first exposure for the foreground and buildings is made in the late afternoon. This must be sufficient to record as much foreground detail as is desired. The photographer then waits until a satisfactory number of lights are turned on in the buildings, and then makes a second short exposure to record the lighted windows and street lamps only. Of course care must be taken that the camera is not moved between exposures.

The problem, of course, is to balance the two exposures so that a natural appearance of twilight is achieved.

No data: 11 x 14" print.



"Winter Night—Central Park"

*Edward Alenius, F.R.P.S.
Jamaica, L. I., N. Y.*



"Brute"

A. W. Prasse, St. Louis, Mo.

Amateur Medal Print

■Mr. Prasse has done a remarkably fine job of photographing this piece of sculpture. The lighting is just right, and the point of view has been selected with excellent judgment. The two combine to impart a tremendous feeling of massiveness and strength to the object. We have no means of knowing what the actual size of the statue may be but are willing to bet that it appears more heroic and dominating in this photograph than in actuality. That statement does not imply that the photographer has improved upon the work of the sculptor. Instead it means that the photographer, because he need present only a single aspect of the statue, and because he can eliminate all elements which indicate actual size, is freed from some of the limitations under which the sculptor must work. Consequently it is possible for the photographer who knows how, to present a heightened, or perhaps we should say, a personal photographic expression of the sculptor's work.

Data: $2\frac{1}{4} \times 2\frac{1}{2}$ " National Graflex; Bausch & Lomb Tessar; $1/30$ th sec. at F:11, at 4 P.M. in May; E. K. Verichrome, in D-76; K-1 filter; Agfa projection paper in D-72. 11×14 " prints on 16×20 " mounts may be obtained at the price of \$10.00 upon application to Camera Craft.

Second Award

Amateur Class



*Herbert P. Bond
Hollywood, Calif.*

Data: $3\frac{1}{4} \times 4\frac{1}{4}$ " Graflex; $6\frac{3}{8}$ " Kodak Anastigmat F:4.5; $1/135$ th sec. at F:11; bright sun about 11 A.M. in April; Agfa S. S. Pan., in Pyro-Acetone; 10×12 " print on Agfa Brovira Kashmir soft, in D-72.

■The backlighting is well chosen to reveal to the full the sharp, spiny beauty of this young cactus plant. Mr. Bond's technical competence as a photographer has served to record that beauty quite successfully. We do not feel that the plant appears to be entirely unsupported at the base but think that there is room for a little more definite indication of a supporting mass at the bottom of the print. Such a mass would not only lend support to the plant structure but would help to give a feeling of stability and completeness to the composition. The few dry branches in the lower right are not really a distraction since they are so nicely subordinated in tone as to be hardly noticeable. Nevertheless it would have been an easy matter to tear these away before making the exposure, and by so doing make sure that they would not cause trouble later. It is always best to play safe and eliminate such details whenever they are unnecessary to the completeness of the picture.

Third Award

Amateur Class

■This fine picture proves two things beyond the shadow of a doubt. First, that natural history subjects provide opportunities for pictures of great pictorial interest. Second, that good pictures in this field can be made without elaborate and costly equipment, for this shot was made with a 3A Kodak, and F:6.3 lens. It cannot be said too often that the secret of good photography is to know how to use the equipment you have. This is more than just a record picture. It has action, good arrangement, and interesting subject matter. Those are the things which make any picture successful. We have seen quite a number of Miss Kent's photographs and wish that more of them were of natural history subjects for she seems to have a real talent for such work.

Data: Eastman 3A Kodak Special, F:6.3 lens; $1/50$ sec. at F:11, on panchromatic film with light yellow filter; 8×12 " print on Royal Bromide, developed in Chlorquinol, sepia toned. 8×12 " prints may be obtained at the price of \$10.00 upon application to Camera Craft. Prints will be exchanged with other prize winners in these competitions only.



"Histoire d'amour"

*Thelma R. Kent
Christchurch, N. Z.*

Fourth Award

Amateur Class

■As we have said before in these pages the effectiveness of a landscape picture depends to a great extent on the establishing of a mood. The mood is established primarily by the subject matter and the light under which it is photographed. The same subject may be presented in various moods under different light or atmospheric conditions. These barren, twisted trees with the mysterious darkness beyond them have an other-worldly quality that elicits a strong emotional response.

There is one factor which detracts from the mood. The foliage in the upper part of the print is brightly illuminated and very matter of fact and uninteresting in appearance. It tends to deny the mysterious suggestions of the dark recesses below. For that reason the picture is much better with about four inches trimmed off the top.

Data: Zeiss Maximar B; Tessar lens; exposure by Weston reading, with K-2 filter, on Agfa Superpan; developed in Agfa #17; 11 x 14" print on Agfa Brovira, in D-72.



"Sentinels of the Past"

F. Elliott Harrell
Richmond, Va.



"A Merry Twinkle"

Fred S. Herrington
San Francisco, Calif.

Fifth Award

Amateur Class

■The attractiveness of this portrait is due to the fact that it is so entirely natural. This fellow looks like just the sort of man who would enjoy a good pipe and an afternoon of pleasant relaxation, and from all appearances that is just what he is getting. Pipes are sometimes quite a problem to the photographer. They often insist on hogging the picture. Observe how successfully Mr. Herrington has handled that problem. By placing a good part of the pipe against the dark background much of its force has been neutralized. It is still there, still contributes what it should to the picture, but does no more than that.

Data: $3\frac{1}{4} \times 4\frac{1}{4}$ " Graflex; $6\frac{1}{2}$ " Zeiss Tessar; $1/10$ th sec. at F:5.6; in shade with light reflected from swimming pool in front of figure; E. K. Panatomic film in DK-76; $10\frac{1}{2} \times 13$ " print on Defender Velour Black DL, in D-72.

Monthly Competitions

Scoring for Club Trophy Cups

The following won points for their clubs in the Advanced Class: Ralph Rex, for The Camera Clique; Fred G. Korth, for the Fort Dearborn Camera Club; Toso Dabac, for the Fotoklub Zagreb; and Glenn D. Beer, for the Los Angeles Camera Club.

The following won points for their clubs in the Amateur Class: F. Elliott Harrell, for the Camera Club of Richmond; Fred S. Herrington, for the E. P. I. C. Group; Herbert P. Bond, for the Los Angeles Camera Club; and A. W. Prasse, for the St. Louis Camera Club.

The following prize winners have no club affiliations: Edward Alenius and Thelma R. Kent.

Contributing Clubs

Camera Art Circle (Poona, India)	Kamera Kranks (Durham, Calif.)
Camera Clique (St. Louis, Mo.)	Los Angeles Camera Club
Camera Club of Long Beach (Calif.)	Miniature Camera Club of Oakland (Calif.)
Camera Club of Richmond (Va.)	Miniature Men (Cleveland, Ohio)
Columbia Camera Club (S. C.)	Montreal Camera Club (Canada)
E.P.I.C. Group of San Francisco	Oklahoma Camera Club
Fort Dearborn Camera Club	The Pack Rats (Pasadena, Calif.)
Fotoklub Ljubljana (Yugoslavia)	Panama Pictorialists (Balboa, C. Z.)
Fotoklub Zagreb (Yugoslavia)	Photographic Society of San Francisco
Huntington Park Camera Club (Calif.)	Sierra Camera Club (Sacramento, Calif.)
Japanese Camera Club (San Francisco)	St. Louis Camera Club (Mo.)
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Club Notes

Forthcoming Exhibitions

46th Toronto Salon of Photography. Address W. H. Hammond, Salon Secretary, 2 Gould Street, Toronto, Canada. Closing date July 31, 1937. Entry fee \$1.00. Limit 4 prints. August 27 to September 11, 1937.

London Salon of Photography. Address F. J. Mortimer, Dorset House, Stamford Street, London, S. E. 1, England. Closing date September 1, 1937. September 11 to October 9, 1937.

Victorian Salon of Photography. Address C. Stuart Tompkins, Hon. Secretary, The Junction. Camberwell, Melbourne, Australia. Closing date September 11, 1937. Entry fee 5s. Limit 4 prints. October 18 to 30, 1937.

International Photographic Exhibition, Centenary of Daguerre in Budapest, Hungary. Address Modern Hungarian Photographers, Rakoczi-ut 19, Budapest, Hungary. Closing date September 20, 1937. Entry fee \$1.00. Limit 4 prints. October 1937.

The Sixth Irish Salon of Photography. Address The Hon. Secretary, The Irish Salon of Photography, 18 Morehampton Road, Dublin, Ireland. Closing date September 25, 1937. Entry fee 4/6. Limit 6 prints. October 30 to November 6, 1937.

First International Salon of The Oval Table Society. Address Joseph M. Bing, Secretary, 10 West 33rd Street, New York, N. Y. Closing date November 1, 1937. November 15 to 30, 1937.

Third International Focus Salon. Address Focus Ltd., Fotosalon, Bloemendaal, N. H., Nederland. Closing date July 31, 1937. Entry fee 2,5 florins, limit five prints. September 11 to 26, 1937.

Fifth International Salon of Pictorial Photography. Address Fotoklub Zagreb, Masarykova 11, Zagreb, Yugoslavia. Closing date August 20, 1937. Entry fee \$1.00, limit four prints. October, 1937.

The Anthracite Salon, under the auspices of the Scranton Camera Club. Address Salon Director, Everhart Museum, Scranton, Pennsylvania. Closing date September 7, 1937. Entry fee \$1.00, limit four prints. September 18 to October 4, 1937.

The Fourth Canadian International Salon of Photographic Art. Address Exhibition Secretary, Canadian International Salon of Photographic Art, The National Gallery of Canada, Ottawa, Canada. Closing date September 10, 1937. No entry fee required. Prints may be sent unmounted. October 23 to November 15, 1937, and afterwards in other Canadian cities.

Eleventh Annual Open Exhibition of the Lincoln Camera Club. Address Hon. Exhibition Secretary, Miss E. Redfern, 8 Cecil Street, Lincoln, England. Closing date October 1, 1937. Entry fee 1s per print. October 29 to November 26, 1937.

First Rhode Island National Salon of Photography. Address J. Clement Grimes, Salon Chairman, The Camera Club of Rhode Island, 103 Westminster Street, Providence, R. I. Closing date November 1, 1937. Entry fee \$1.00, limit four prints. November 15 to 30, 1937.

Sports Afield's Contest

The Sports Afield's amateur photographic contest for movies and stills is now under way. 50 prizes are offered, in merchandise and cash awards and the contest which opened May 15th will close November 15, 1937. You have plenty of time to prepare your entry. Write to the Contest Editor, Sports Afield, Phoenix Bldg., Minneapolis, Minn., for your copy of the rules.

First International Competition of the Woerther Lake District

Any photographer who has taken pictures in or around the Woerther Lake in Austria, is entitled to enter such pictures in the District's prize competition. 39 prizes are offered and complete rules may be had by writing this magazine.

Caterpillar Tractor Co. Forms Camera Club

On March 17, the newly organized Caterpillar Tractor Camera Club of Peoria, Ill., held its first meeting. Executive committees under Charles Geiger, Miller Owen, R. V. McElhiney, and Jack Lewis were selected to carry on the administrative duties of the club until officers shall be elected June 9th.

The Caterpillar Tractor Co. is furnishing meeting rooms, glass panelled gallery, and darkroom facilities for the members, who will meet on alternate Wednesday evenings at 7:30.

On April 14, J. H. Sammis, pictorialist of the Peoria Photo Forum, spoke to the club on "If I Could Do It Over Again."

Medo Contest Rules

1. All entries must be received not later than midnight, October 15, 1937, at Medo Photographic Supply Corp., 15 West 47th Street, New York, N. Y.

2. Contact prints or enlargements, black-and-white or tone from 5 x 7 in the Amateur Class, and from 8 x 10 in the Candid Class, up to 16 x 20 in either class are acceptable.

3. Name and address of contestant must be pasted or legibly written on the back of each print or mount.

4. Class in which picture is submitted (see below) must appear on back of print or mount.

5. Contestants may enter as many prints as they wish.

6. All contestants agree to accept the decision of the judges as final and binding.

7. No employees of Medo Photo Supply Corp., or their relatives, may enter.

8. Entrants waive all claims for damage or loss due to handling.

9. If return of print is desired, return postage must accompany it.

10. Prize winning photographs become the property of Medo Photo Supply Corp., who retain the right to ask for loan of negatives from which such prints were made to use in publicity or advertising.

11. **CLASSES—Class 1—AMATEUR**, for non-professionals only. Any type of picture, taken with any type of camera except a miniature. **Class 2—CANDID**, open to amateurs and professionals. Any type of picture taken by any genuine miniature camera. Note: original contact print must accompany enlargements entered in CANDID class.

12. Address all entries to Contest Editor, Medo Photo Supply Corp., 15 West 47th Street, New York City.

Berkeley Camera Club

This group, organized primarily to afford suitable darkroom facilities to its members, has no officers, no regular meetings. Their membership, which is now 5, is open up to 15 members, the capacity of their workrooms. This enthusiastic nucleus constructed most of their equipment and as each member has his own key the rooms are available 24 hours a day. For further details, write the Berkeley Camera Club, 2304 Ellsworth St., Berkeley, Calif.

List of Loan Exhibits for Camera Clubs

The Photographic Society of America has prepared a list of loan exhibits that are available to Camera Clubs for the asking. Complete details for obtaining the exhibits accompany the lists and the Society asks that all correspondence be sent direct to the addresses as listed as time will not permit them to answer correspondence about the exhibits. Lists may be obtained from L. H. Longwell, Director Loan Exhibits, Photographic Society of America, 138 S. Kenilworth Avenue, Elmhurst, Illinois. Remember to attend the Convention of the Photographic Society of America, October 9-10, at the Blackstone Hotel in Chicago, Illinois.

Correction

The picture that appeared on page 271 of the June, 1937, issue should have been credited to Mr. Theo Eseler, instead of Theo Eschen. Our apologies to Mr. Eseler for this error.

San Francisco Museum of Art Receives Carnegie Grant

The San Francisco Museum of Art has received a grant of \$7,500 from the Carnegie Corporation of New York in support of a program of adult art appreciation for the year 1937-1938. With this subsidy, the San Francisco Art Museum will conduct a course for adults planned to aid in understanding art as an integral and helpful part of daily living. For complete details write San Francisco Art Museum, Civic Center, San Francisco, California.

P. Douglas Anderson Yosemite Valley Courses

P. Douglas Anderson, F. R. P. S., will conduct two one-week photography courses in Yosemite Valley this summer, under the auspices of the University of California Extension Division. The courses will consist of a week's practice in outdoor photography, with a field trip each day. Routes for the six field trips will be chosen for variety of subjects and interesting light angles. Previous photographic experience is unnecessary. Dates for the first course are July 12 to July 17; for the second, July 19 to July 24. As no more than 20 students will be accepted for either section, advance enrollment is advisable. Enrollments will be taken at 301

California Hall on the University campus at Berkeley, 1730 Franklin Street in Oakland, and 540 Powell Street in San Francisco.

American Photographic Show at Paris International Exposition

A comprehensive photographic show will be part of the American contribution to the Paris International Exposition this summer. The show will be divided into two sections, both arranged by T. J. Maloney, Inc. The first section will contain the work of two hundred outstanding American photographers. The second will be the showing of Will Connell's satirical portrayal of the moving picture industry, which most critics and photographers claim to be the best complete story ever told in modern photography.

Rolleiflex Salon in Philadelphia

The Rolleiflex Salon for 1937 will be on exhibition in Philadelphia, Pa., during the week of July 10 to 18. The show consists of the prints receiving prizes and honorary mention in the recent Rolleiflex Contest, as well as a number of other fine exhibition prints. At this writing, the actual place of exhibit is not known but notices will be posted at all local photographic supply houses or you may write Burleigh Brooks, 127 West 42nd Street, New York, N. Y., for this information.

Photographers' Association of America Convention

With the Convention only two months

away, all signs indicate that this year's meeting will be the greatest in history. The Convention will be held from August 23 to 27 in Chicago, Illinois, at the Stevens Hotel. The Picture Exhibit Rules are now available and this year's show will be in keeping with the rest of this record setting convention. All professional photographers are invited to submit prints whether or not they are members of the Association. Copies of the complete rules, as well as other information about the convention, may be had by writing the Executive Manager, P. A. of A., 520 Caxton building, Cleveland, Ohio.

Newport Harbor Photographic Contest

For those in the vicinity or those who will be traveling that way, the Newport Harbor Chamber of Commerce offer participation in their Annual Photographic Contest. Newport Harbor is 40 miles from Los Angeles, California, on National Highway 101 and although we have never had the pleasure of visiting this community, its reputation as a paradisaical resort is widespread and, of course, this makes it a splendid field for the photographer. The contest is open to all and photographs must be taken at Newport Beach after May 1, 1937, and not later than July 17, 1937. Entries close on July 25. Complete details and entry blanks may be had on request from Newport Harbor Chamber of Commerce, P. O. Box 118, Balboa, California.

Notes and Comments

Ingham Buys Samuel Studio

George F. Ingham announces the purchase of the Commercial Photography Studio, operated for 16 years by Mr. Ford E. Samuel, at 470 Thirteenth Street, Oakland, Calif. During a considerable part of this time, Mr. Ingham has been associated with Mr. Samuel and for the last three years has been the sole manager and operator. George F. Ingham will offer complete commercial service including copies, photostats and coloring and he wishes to assure his customers that he intends to follow the same high standards for which Mr. Samuel built up such an enviable reputation.

President of Ihagee Visits San Francisco

Mr. Johan Steenbergen, president of the Ihagee Camera Works, of Striesen 939, Dresden, Germany, manufacturers of the Exakta Camera, recently visited San Francisco and called at the offices of Camera Craft. We found Mr. Steenbergen to be an unusually pleasant gentleman with a close attachment for our city for he is married to a San Francisco girl. Mr. Steenbergen stated that business was very good which is only as it should be considering the excellence of the Exakta Camera and Equipment. We will hope for another visit from Mr. Steenbergen in the very near future.

Burleigh Brooks Announces New Low Prices and New Equipment

The famous firm of Burleigh Brooks announces the welcome news that they have effected a general downward revision of prices. New revised price lists are available and may be obtained on request.

The new **Bee Bee Negative File** is now available in three sizes to accommodate all types of negatives. This finely made leatherette covered wooden box will file from 200 to 600 negatives and the numerical index included makes instant reference possible.

The **Bee Bee All Metal Enlarging Easel** may be had in either 8x10 inches or 11x14 inches. Besides its all metal indestructible feature it has an automatic margin adjustment lever and unique locking bases that insure rigid alignment of sliding arms.

The **Bee Bee Viscose Film Drier** makes use of the well-known properties of Viscose sponges, that wipe off moisture from films or plates instantly and because of their extreme softness and freedom from lint without danger of damage. The Drier consists of two Viscose sponges mounted solidly in wooden holders with rust-proof metal handles.

These are but a few of the new features in Burleigh Brooks line and full details on new equipment as well as their complete stock of equipment and new prices may be had by writing, Burleigh Brooks, 127 West 42nd St., New York, N. Y.

Fotoshop Repair Service

Quick, prompt, efficient repairs on cameras, both still and cine, are now a feature of the Fotoshop organization at 136 West 32nd St., New York. All work is done on the premises, the service including such items as shutter adjustments of both compur and focal plane type, bellows replacement and mending; track alignment; welding; etc. Each rebuilt camera taken in by the Fotoshop is given a thorough inspection and overhauling—a tag on each camera certifying as to the efficiency and condition of the apparatus—this tag being the buyer's guide to quality in rebuilt or repaired merchandise obtained through the Fotoshop organization.

Wahl Automatic-Electric Time Switches

The Wahl Automatic-Electric Time Switch is an ingenious device that eliminates the guess work from timing exposures and other operations where accuracy is essential. As a special offer, a clipping of the advertisement that appears in this issue is worth \$1.00 with the purchase of a Wahl Timer which is priced at \$9.00. For further details, write Wahl Electric Co., 814 Broadway, New York, N. Y.

Capital Camera Exchange

Just opened recently, is the new store of the Capital Camera Exchange (formerly Izzy's Exchange), at 1003 Pennsylvania Avenue, N. W., Washington, D. C. This modern, up-to-the-minute store vies with other artistic and architectural attractions along the famed Pennsylvania Avenue for here is the last word in modern store arrangement and display, with all the merchandise under glass, enticingly high-lighted with concealed illumination. The second story has been converted into the finest of auditorium and motion picture projection rooms, dust-proof and air-conditioned as is the store throughout. The auditorium is available to camera clubs and photographic demonstrations, with seating accommodations for more than 100 people. This new, more accessible location was chosen by Izzy's Exchange for its expansion. Fixtures and layout were planned months in advance. Provision has been made for a highly departmentized, convenient, comfortable shopping facility for the customer. "Izzy" Nochlin and the genial Sam Schwartz are to be congratulated on their handiwork.

Photo-Markets Press Service

All who know Mr. John P. Lyons are doubly reassured when making use of the Photo-Markets Press Service. Mr. Lyons has had many years' experience in this line, pioneering in the development of his excellent Photo-Markets. He offers press cards, automobile "press" plates, and model release forms at the right prices. The latest, seventh edition of Photo-Markets, is now ready for the market at the new low price of 40c per copy. Write Photo-Markets, 405-B Evans Building, Washington, D. C., about your camera-journalist needs.

Original Camera Designs Wanted

A large manufacturer will consider original candid camera designs for volume manufacture on a royalty basis. They ask that those interested send no plans until they have communicated with the company receiving complete details. Write, N. F. A., c/o Camera Craft, 425 Bush Street, San Francisco, California.

W. Schiller & Company in New Location

W. Schiller & Company of St. Louis, Missouri, is a firm well known to all residents of that city and the surrounding country for their reputation of reliability and service, established over many years. After forty years in their former location, they have moved to new quarters at 1109 Locust Street. The new store will have four floors and basement and allows ample room to take care of their complete photographic service. The amateur as well as the professional will find everything to fill their needs in a modern and up-to-date setting at the W. Schiller & Company new location.

New Murphy Catalogue

George Murphy, Inc., announce their new Catalogue No. 137. Larger than any previous catalogue, No. 137 is a veritable encyclopedia of photographic materials of both American and European manufacture. Due to the large size of the catalogue, 25 cents is requested to help defray postage charges; however, this amount will be returned to the customer with his first purchase of \$1.00 or more. Write for Catalogue No. 137 to George Murphy, Inc., 57 East 9th Street, New York, N. Y.

The Marks Polarator

This is a new and clever device that enables accurate adjustment of the Marks Polarization Plate to any still or movie camera at the angle of its maximum polarization efficiency. Although this angle of efficiency can be determined with the plate alone, Kin-O-Lux, Inc., found that in adjusting it to the camera the proper angle was often lost. The Marks Polarator eliminates the possibility of error and assures maximum efficiency. It is not necessary with reflecting or ground glass cameras as the proper angle may be determined on the ground glass; however, on all other types the Polarator will insure accuracy. Kin-O-Lux, Inc., 105 West 40th Street,

New York, N. Y., will send you further details on the Polarator on request and further information on Polarization in photography.

Contax or Leica Speed Flash Adapter and the New "Superflash" Bulb

The Kalart Company announces two of their latest developments in speed flash photography. The new Speed Flash Adapter for the Contax or Leica is an inexpensive device costing only 75 cents. The new "Superflash" flash bulb is filled with a measured length of hydrolanium wire. The bulb has a longer period of peak illumination which ends the problem of unevenly exposed negatives. Satisfactory results can be obtained at all shutter speeds from 1/50 to 1/1250 second. The following exposure table is suggested for cameras of the Leica and Contax type which are equipped with small focal plane shutters. It is not to be confused with the table for between-the-lens shutters of the Compur type, which is published in the folder "What is a Speed Flash," copies of which may be had free of charge from the Kalart Company, 56 Warren Street, New York, N. Y.

Exposure Table for Films of Weston 24 Daylight Rating

Distance from bulb to subject	(For shutter speeds 1/50 to 1/250 second)
10 feet	f8
15 feet	f5.6
20 feet	f4.5
25 feet	f3.5

(For shutter speeds from 1/500 to 1/1250 second)

10 feet	f5.6
15 feet	f4.5
20 feet	f3.5
25 feet	f2.8

New Speedgun Lighting Technique

Word comes from S. Mendelsohn, manufacturer of Speedguns, of the sudden interest in what press photographers call "arm length lighting." The new system calls for holding the Speedgun battery case (with bulb and reflector) at arm's length from the camera instead of in its customary place at the side of the camera. The photographer operates the Speedgun tripper from this detached position without a tripod and can thus obtain many unusual lighting effects not possible with

ordinary photoflash apparatus. For example in portraits, or in the lighting of specific individuals in a group quality or special emphasis can be obtained. The accessory for this service is known as the "Speedgun Side Extension" and lists for \$1.00. Several of the leading news syndicates have provided their men with these attachments. Further information can be obtained from S. Mendelsohn, 202 East 44th Street, New York, N. Y.

Tilt-O-Rama Tripod Top

Nothing is more important in creative camera work than the proper swivel attachment on the tripod top. Hence, all camera fans will welcome the new Tilt-O-Rama Tripod Top, which is now being introduced to the United States by Henry Herbert of 485 Fifth Avenue, New York City. Differing in construction from less expensive adjustable tops now on the market, the Tilt-O-Rama is made of extremely lightweight, polished aluminum. Its panoramic scale, with graduated calibrations, makes it indispensable for landscape photography. Easily tilted, its adjustable ball socket permits the focusing of the camera in any direction, at any angle. The Tilt-O-Rama will fit any camera and tripod which possess standard sockets and screws. And it will hold even the heaviest of cameras securely and safely.

Kodak Pola-Screens for Amateur Cameras

Eastman has now made its famous Pola-screens available for use on amateur "still" cameras as well as on amateur motion picture cameras. For amateur "still" cameras, the Pola-screens Type 1A come in four sizes, designated as Series V, VI, VII and VIII. For each size is available a range of adapter rings with which the Pola-screen can be fitted to the lens mount of practically any camera. Separate lens hoods are also available. With a Kodak Pola-screen, pictures can be taken obliquely through glass or water so that the details beyond are clearly visible without objectionable surface reflections. Surfaces—metal surfaces excepted—can be photographed obliquely so that reflections interfering with renditions of surface detail or with good composition, can be subdued. The blue sky, in pictures made at right angles to the sun's rays, can be recorded in any shade from light

to quite dark gray in black-and-white pictures. When pictures are being made in full color with Kodachrome, subjects can be made to stand out strikingly against a dark blue sky. This method of darkening the sky is the only one possible in color photography.

Tuma-Gas Booklet Free

For many years Tuma-Gas paper has enjoyed a reputation among professionals, pictorialists and amateurs which is perhaps due more to its extraordinary flexibility and extreme latitude than to any other reason. All kinds of results are possible with this outstanding product. Blue tones for night and snow scenes and marines, lovely brown tones of great variety by direct development as well as through the use of Tuma-Toner, a one-solution, no redevelopment toner, and now perfect red chalk tones through the use of another toner to be used with Tuma-Gas paper. The possibilities of the paper have been completely described in a comprehensive little book, entitled "TUMA-GAS—The Perfect Paper and How to Use It," published by the Tuma Photo Paper Co., 1170 Broadway, New York City. The booklet describes in complete detail all the uses of the paper and the correct methods to be used, whether for glossy prints for reproduction or for red chalk tones of great delicacy for portraits of women and children, giving formulae in both metric and avoirdupois. The booklet is free and can be obtained by addressing the Tuma Photo Paper Co. direct.

New Super Plenachrome Roll Film

A new, faster roll film, "Super Plenachrome," has been added to the group of roll films for amateur use made by Agfa Ansco Corporation in Binghamton, N. Y. In addition to greater speed, the new orthochromatic film possesses higher color sensitivity, improved brilliance and extreme latitude. Picture-taking with Super Plenachrome sets new standards of certainty because its latitude minimizes exposure errors and insures good results. The new roll film is protected against unsharpness due to halation and is provided with a special surface coating to prevent scratches during handling. The new Agfa Super Plenachrome roll film is now available at photographic dealers.

Our Book Shelves

In Pictures, A Hollywood Satire, by Will Connell. Published by T. J. Maloney, Inc., of New York. 105 pages, 48 illustrations, cloth bound, boxed, price \$3.50.

Everyone has heard of Will Connell's famous satirical pictures of Hollywood and, perhaps, may have seen a few of them in the photographic magazines or annuals. Forty-eight of the series appear in this book, in a large 10 x 12 size that shows them to their best advantage. Accompanying the pictures, is a separate story entitled "Hollywood Conference" and written by Nunnally Johnson, Patterson McNutt, Gene Fowler, and Grover Jones, all well-known screen writers.

Connell's pictures show the full power of the camera in satire and his brilliant use of modern technique has added greatly to their strength. The skill with which he conceived and made these satirical master-

pieces cannot be told here for it is necessary to see these pictures to appreciate the superb workmanship of the photographer.

If you are interested in modern photography and appreciate technical and artistic genius; or if you like sophisticated humor and biting satire, then we can recommend this book.

Amateur Movie Production, by William J. Shannon. Published by Moorfield & Shannon of Nutley, N. J. 64 pages, leatherette paper binding, price 50c.

This book begins with instructions on the organization of a movie club and then proceeds to outline club procedure in the production of a movie. Complete details are given including hints on scenario writing with samples, movie tricks, make-up, etc. This book will be very helpful to movie clubs or to the individual who wants to go it alone.

Classified Advertisements

FOR SALE OR EXCHANGE

◆Cooke Portrellic 10½ inch F:4.5 fitted to 4 x 5 Auto Graflex. Like new. Cost \$133.50. Exchange for Carl Zeiss Ic F:4.5 or other lens of about same focal length and value. O. R. Moll, Durham, Calif.

LENZAL

Can you keep your lens sparkling clean? Clean it the safe way, the modern way, with LENZAL! Send 50c for complete LENZAL kit.

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NEED MONEY?

WE LOAN MONEY on all kinds of cameras. Specializing in miniature, reflex, graphic, movie cameras and accessories. Also binoculars and microscopes. All loans are good for one year. Low interest rates. No extra charges of any kind. Write us for further details and loan value of your equipment. H. Stern, Inc., 872 Sixth Avenue at 31st St., New York City. Bonded pawnbrokers since 1858.

STUDIOS FOR SALE

◆Well established, modern, attractive photographic store and studio, enjoying splendid reputation and doing a profitable volume. Located small home city Southern California. Opportunity for one who enjoys doing quality work. Address A. B. C., Care Camera Craft, 425 Bush St., San Francisco, Calif.

◆Fully equipped portrait and finishing studio, 16 Kodak agencies, good location, very low rent. This paying business is fine for live couple. Investigate this. \$1000.00 cash. Oregon Photo Shop, 3519 S. E. Division St., Portland, Oregon.

INCOME from your camera instead of expense.

Low-cost, home course teaches you to make photographs for magazines, newspapers, advertisers. Tremendous demand. Earn good money wherever you live. Free book. Universal Photographers, Dept. K, 10 West 33rd St., New York.

• CLASSIFIED ADVERTISEMENTS •

OUTFITS FOR SALE

◆Pathex motor driven projector and camera with carrying case and 3,800 ft. 9.5 mm. Library film, \$35.00. George Clayton, 721 Loma Vista Dr., Long Beach, Calif.

◆Contax II, F2 Sonnar, 50 mm. Collapsible mount, Everready case, three filters, one Proxar lens, Weston meter, level finder, metal tripod, tripod head. Like new, all for \$210.00. Address H. Siw, 1131 Stockton St., San Francisco, Calif.

◆5 x 7 Ansco Universal View camera with 11¼ inch F:4.5 Heliar Lens in Compound shutter. 6 film holders and carrying case. Condition like new. Real Bargain, \$100.00 cash. Address P. W., Care Camera Craft, 425 Bush St., San Francisco, Calif.

◆Contax I, Sonnar F2, 5 cm. Fine condition. Ever-ready and pouch cases. Accessories. \$115.00. Philip de Lara, 6195 Oak Crest Way, Los Angeles, Calif.

◆Leica D, eyelets for neck cord with strap included, 50mm. Elmar 3.5. Slow speed timing device 1 to 1/8 sec. Leitz Yellow Filter II. Cash \$77.00. M. Preusser, 1330 Locust Street, Dubuque, Iowa.

◆Model G Leica, F2 Summar, Everready case, absolutely like new, \$139.50. J. R. Keach, Box 45, Kensington, Brooklyn, N. Y.

◆Model G Leica Summar F2, 50mm., Everready case, brand new, for cash sale \$150.00. Hugh Klein, 491 Staten, Oakland, Calif. Glencourt 9893.

◆No. 8 Circuit outfit, Turner Reich lens, excellent condition; 3¼x4¼ R.B.Graflex, film pack adapter, roll holder, with or without lens, 4x6 Voigtlander Alpine Metal camera, film pack adapter and six single plate or film holders; 4¼x6½ Eastman Kodak

fine lens, 4 double plate or film holders. Mt. Whitney Studio, Box 53, Lone Pine, Calif.

◆Leica "C" with Hektor f2.5 lens, range-finder, cable release, two film magazines in velvet lined metal case, all in a Leica leather case, \$65.00. Have Ever-Ready case, sunshade, K-1, and Red "A" filters, both in mounts. \$75.00 takes whole outfit. Good working condition, camera was cleaned and adjusted several months ago. Beaumont Apple, Ellensburg, Wash.

◆9x12 Ideal, Zeiss Tessar f4.5, 15 cm., complete with Proxar Distar, 21 plate holders and sheaths, 6 reducing kits, F.P.A. case, 6 cemented filters and holders, \$53.50. V.P. Billy O f3.9 new Compur shutter, Leica range finder, filters and sunshade, Special Optical Finder, case \$23.50. John S. Phillips, 101 Jordan Avenue, San Francisco, Calif.

◆Graflex, telescopic, revolving back, 3¼x4¼ with 5x7 B & L Zeiss f4.5 lens, plate and roll holders. Also Speed Graphic 3¼x5¼ with 9½" Dogmar f4.5 combination lens. All excellent shape. Quick sale cheap. Elston Camp, 1752 Walnut Ave., Seattle, Wash.

OUTFITS WANTED

◆4 x 5 long bellows plate camera. Also 9 x 12 Kawee or similar camera. Will pay cash for best bargain offered. Jesse Earle, La Porte, Ind.

◆Used 12 x 20 camera if price is low and bellows in good shape, without lens. C. G. Johnson, 1127 Ninth Ave., Honolulu, T. H.

◆Model B Exakta, V. P. size f:2 and case, A1 condition. What price? Address V. C. H., Care Camera Craft, 425 Bush Street, San Francisco, Calif.

LEICA "G" Summar F2, like new \$139.50. Rolleiflex 6x6 Tessar F3.5, new with case \$89.50 Rolleicord 6x6, Zeiss F3.5 new \$59.50. Stereoscopic Camera, matched F4.5 lenses & filters, like new (List \$325) Special \$42.50; 100' film including processing \$1.98. Bargains Movie-Photographic Equipment. Trades accepted. Request catalog, MOGULLS, 1944-C Boston Road, N. Y. C.

USED LEICA AND CONTAX WANTED — CASH PAID

Bargain: Super Ikonta 8, in case, \$105.00 perfectly new

Miniature Camera Shop
1600 Post Street San Francisco, Calif.

BETTER pictures from your ARGUS with the Don Precision Focusing Lens Mount

You can now focus your ARGUS exactly for all distances from infinity down to 4 ft. by means of a convenient screw ring added to your lens barrel. With the DON focusing mount you need no portrait attachments, and your ARGUS equals most high-priced miniature cameras. Only \$5.00 attached. Inquire or send camera to Pattee Scientific Development Co., Niantic, Conn.

PHOTO POSTCARDS

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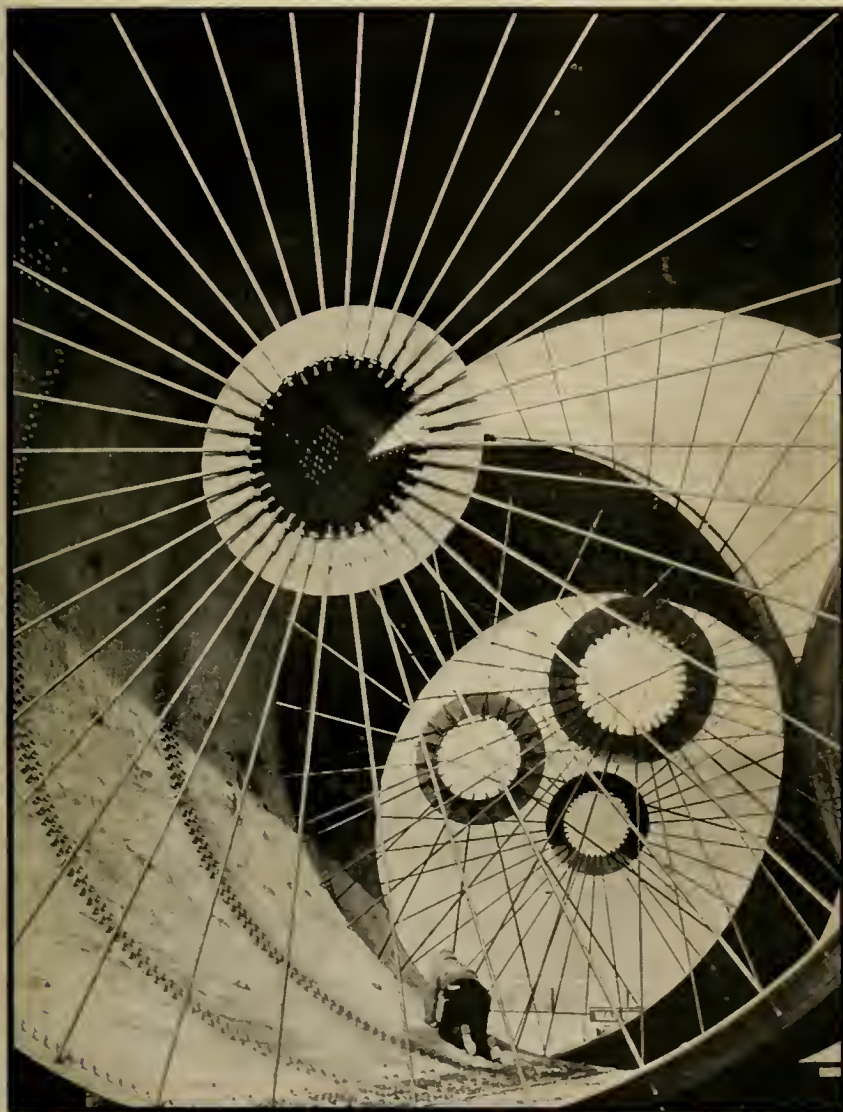
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"Wind Tunnel Construction"

Margaret Bourke-White

4th International Salon of the Pictorial Photographers of America

August 1937

Petroleum Prerequisites

A. A. Salon

Photographing Eyes

Prerequisites for the Photographer

PRICE 25c

William Mortensen

J. T. Morey

Alda Jourdan



"April"

Van F. Dunlop

Bromoil Prerequisites

William Mortensen

Introduction to the Illustrations

IT HAS been said that a teacher may count himself fortunate if one out of five hundred of his students is able to profit by his instruction.

This article is illustrated by examples of the work of Van Dunlop, one of the most successful of my students in the field of the bromoil transfer.

Numerous students of mine, despite their native talents, have failed to accomplish anything with bromoil transfer because they have dissipated and confused my instruction by foolish and premature experimentation with the process before they had mastered its essentials. Mr. Dunlop, on the other hand, has kept within the strict system of procedure that I gave him until he was able to make this delicate but stubborn process do his bidding. Only lately has he introduced variations into these completely mastered procedures. Mr. Dunlop, for example, has found it to his advantage to use a slightly heavier stock for preparing the matrix than that which I recommend.

The system, when mastered, proves flexible in its applications. I have not, for instance, used bromoil extensively in landscapes, for the simple reason that I am not myself addicted to landscapes. Mr. Dunlop has, however, employed the process very successfully in this field. The charming frontispiece is an example of his extension of the process to other subject matter than that in which he learned it.

It is a great pleasure to thus introduce the pictures of a talented worker who will, I am sure, go far in this field.

* * *

The worker in photography sometimes has occasion to revert to the ancient animistic belief that inanimate objects may become possessed of devils. There are moments and days in every photographer's experience

when it seems that a perverse and malignant intelligence lurks in his equipment and material and gleefully thwarts his every effort. In no other phase of photography does this mischievous influence, the dark-room *poltergeist*, make itself so frequently felt as in the Bromoil Transfer process. For sheer cantankerousness, for utter orneriness and downright crabbed stubbornness, the Bromoil Process makes a Missouri mule look like a model of meekness and propriety.

It is precisely this stubbornness that adds in a large degree to the satisfaction that one realizes in bringing this difficult process under control. It is emphatically not a field for lazy dabblers. Those who undertake bromoil must not be afraid of work and must, furthermore, enjoy working. If one were able to secure beautiful prints by merely punching a button and turning a crank, there would be little pleasure in the process, even though one might concede the beauty of the product. But the joy of conflict, of conquering obdurate materials, and of triumphantly wrestling with refractory processes, adds immeasurably to the personal value of the result. It is worth more and means more because it has been fought for.

The further and ultimate satisfaction from this process, once it has been fought through, is the beauty of the result. It is, I believe, the most beautiful of the photographic processes. In unskillful and impatient hands nothing is more terrible, but when well treated with firm and understanding hands, no other process is capable of such delicacy of gradation or of such luminous breadth.

In the field of the Bromoil Transfer the indisputable master was the late Arthur Kales. For nearly twenty years he made it his exclusive province. No other photographic problems claimed his attention during this time. With single-hearted enthusiasm he devoted himself to solving and simplifying the knotty and involved problems of this beautiful but crabbed process.

It was my good fortune and privilege to work with him for an extended period about twelve years ago. The bromoil process as I practice it, and as I preach it to my students, is based throughout on the procedures that I learned from Arthur Kales.

The bromoil does not begin with making the matrix. Failure to realize this fact is a fruitful source of bad results. Making the matrix, inking it, and transferring it, are but the concluding stages of the process. The successful bromoil worker must start his thinking and planning in terms of his process much further back. Numerous important conditions must be understood and conformed to before a good matrix can be made. It is concerning some of these prerequisites that I wish to talk in this article.

These prerequisites will concern themselves principally with two main topics:

1. Subject matter
2. Negative quality

Subject Matter

Much time and valuable material is wasted through trying to make bromoil transfers out of subject matter that is not adapted to the characteristics of the process. Often the process is blamed for feeble results when



"The Wagoner"

Van F. Dunlop



Fig. 1

Subject matter suitable for bromoil.



Fig. 2

Subject matter unsuited for bromoil.

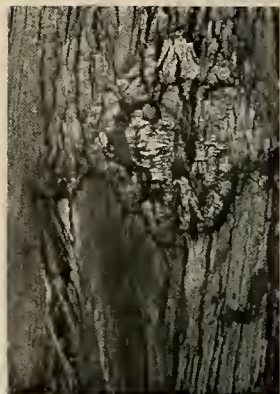


Fig. 3

Detail without important mass. Unsuited for bromoil.

the incongruous subject matter is the real source of the trouble. So it is important, in order to realize good results from bromoil, that one should be able to recognize good subject matter and to discard subject matter that, although it might be otherwise pictorially and photographically effective, is not suited to the qualities of this particular process.

Note Figures 1 and 2. These are small unretouched prints, just the sort of proofs that you might scan in looking for subjects to convert into matrixes. Photographically they are about on a par. The negative quality (which we will discuss presently) is nearly identical in the two cases. But of these two pictures, Figure 1 might be made into a very good transfer and Figure 2 would prove to be quite hopeless.

Let us note more specifically the characteristics of bromoil subject matter.

The primary characteristic is *breadth*. By "breadth" I mean that the subject depends for its effect upon the dominance of large masses, to which detail is subordinate or incidental. Detail should be of a sort that can be implied rather than fully rendered. The process is not incapable of rendering and resolving quite fine detail, but such subject-matter is felt to be at odds with the process itself. Therefore, subjects that depend for their effect upon close rendition of detail and texture would be quite out of place in bromoil.

Note Figure 3, for example. This is a close-up of a eucalyptus tree similar to the one that functions so beautifully in the frontispiece. Although large masses are here present, they are not important. The importance, if any, of this picture lies in its texture and detail. These would be better realized in the straight photographic rendering with a large-sized camera and a glossy print.

The second essential characteristic of bromoil subject-matter is *freedom from contrast*. It is impossible to make a good bromoil from contrasty subject matter. Contrast may appear in a subject in two ways, both of which are deleterious to the process:



"Yoshi-Ko"

Van F. Dunlop

1. Contrast in *local tone*
2. Contrast in *lighting*

1. Subjects in which large areas of black and white are brought into juxtaposition are generally to be avoided. Such juxtapositions are pictorially bad anyway, and in bromoil they are particularly crass and upsetting. Contrasts of this sort are felt to be contrary to the very essence of the process, for the latter is especially noted for its long and luminous gradation of half-tones. Excessive contrasts of local tone are particularly apt to appear in patterns in dress material, in the combination of masses of black hair with very white flesh, etc., etc.

Learn to discount colour. Even experienced workers are sometimes led, by the seduction and interest of local colour, to overlook quite glaring and ugly contrasts of local tone. To prevent one's judgment from being swayed by irrelevant considerations of colour it is essential for the bromoil worker to own and have frequent recourse to some sort of monochromatic viewing glass.*

2. Contrasty lighting is a very frequent source of failure in bromoil. Such contrast is, of course, increased during projection, and the process itself further increases it into the tragically prevalent travesty of black smudges and white smears.

This does not mean that one should limit oneself to a Basic type of illumination. The Plastic Light is extremely effective for bromoil use, as is shown in Mr. Dunlop's picture *June*. Even such an apparently contrasty illumination as the Dynamic Light may be employed, provided care is taken to keep the shadows luminous. Owing to the peculiarities of the process, luminous shadows are rendered in a particularly rich and glowing fashion, but an empty shadow is just a dead blot of ink.

We should note that lighting plays a very different function in portraiture or representation of the figure from that which it plays in landscape. In the former case, the lighting is merely the incidental means of illumination. In most landscapes, however, the lighting is the very essence of the picture. In the average landscape, the forms and shapes are less important than the emotional quality of the light.

This is well demonstrated in the pictures of Leonard Misonne. His prevalent theme of a road—dusty, clogged with snow, or drenched with rain, as the case may be—is always subordinated to the grandeur of his lighting schemes. And note that his illumination, although powerful and effective, is never contrasty. It is the soft light from cloudy or gray skies, or the breaking up of early morning mist, that is most characteristic of his pictures.

Negative Quality

After the choice of appropriate subject matter, the second prerequisite

* The Pot Blue Sheet Glass which is carried in stock by large glass or chemical supply houses will make a fairly satisfactory viewing glass. Libbey-Owens-Ford Co. manufactures what is known as Dark Blue Plate Glass, which will also serve the purpose. These materials cost from 25c to 50c for a four-inch square. They are not absolutely monochromatic, but will give reasonable satisfaction in practice.

It is probably unnecessary to tell the reader that the viewing glass is used only before the eye to inspect the gradations of the subject as they appear in monochrome. It is never used in front of the camera lens.



"June"

Van F. Dunlop

for Bromoil is a *negative of correct quality*. The negative requirements for Bromoil are stringent. No approximation serves: the conditions must be met exactly.

In one respect only are the requirements less severe for a Bromoil negative than for an ordinary projection negative. This is in the matter of *grain*. Considerable grain may be tolerated in a negative that is used to make a matrix, owing to the fact that the graininess that is inherent in the Bromoil process tends to counteract and obliterate the grain of the negative. For this reason, Bromoil is a particularly effective process with miniature negatives.

Although a considerable degree of graininess may be permitted, the best possible definition and gradation are demanded in Bromoil. As in all other photographic processes, these two qualities are the *sine qua non* of good work.

In preparing the bromoil matrix, the negative is, of course, projected. This fact to some extent defines the quality of the bromoil negative by eliminating the heavy dense sort favoured for contact printing.* But not all projection negatives will serve for Bromoil. Indeed, the type commonly accepted as a good projection negative would serve very ill for Bromoil.

A good bromoil negative must adhere to the formula I have elsewhere described as "the minimum of exposure and the maximum of development." This means an exposure based on the light-area of the image and developed to gamma infinity. For practical purposes, "gamma infinity" means development for not less than an hour and a half in a solution of reduced alkalinity such as Metol-Borax or Rodinal.*

This procedure results (assuming the subject material to be correct) in a negative with full and soft gradations in the middle tones, with shadow-areas showing ample traces of drawing, with a few small "accent shadows" of clear glass, and with small high-lights as opaque as spots of ink. The general effect of the negative will be soft and limpid rather than brilliant and "plucky."

Check prospective Bromoil negatives in front of an illuminated white background. Note carefully the relative areas occupied by the different tones. The diagrams in Figure 4 will be of help in placing the quality of the negative. Figure 4A shows an all-too-familiar type of tone distribution. It is characteristic of most record shots and of all attempts to deal with contrasty subject matter or lighting. Note that most of the area is given over to extremes of the tonal scale, and that such gradation as remains is crowded into a small and restricted area. Such a negative as this is altogether hopeless for use in Bromoil. Figure 4B shows the tonal distribution of a so-called "brilliant" negative. Here there is more opportunity given to display the gradations of the middle tones, but the extreme tones still occupy too large an area. This type of negative has its pictorial uses,

* The "Perfect" Negative (Camera Craft, May, 1937) describes in more detail the varying types of negatives required for different uses and conditions.

* Those unfamiliar with this procedure will find fuller details in the author's **Projection Control** (Chapter Three) and **Pictorial Lighting** (Chapter Four).

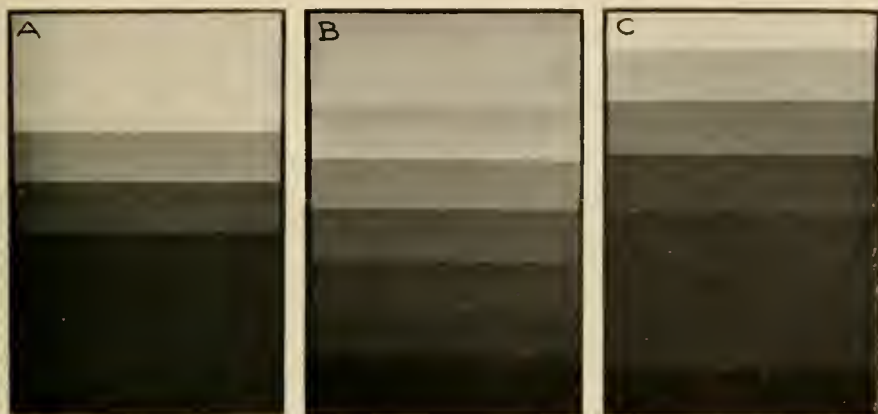


Fig. 4. Negative Quality

but it will not work well in the Bromoil process. The relatively large area occupied by the extreme tones means that the accents of intense light and shadows are to a considerable extent lost in the surrounding area. Note also that in types A and B the lightest area is somewhat veiled over: this means that the extreme range of tone represented by clear glass is not taken advantage of, thus losing accent blacks in the final print.

In Figure 4C is shown the tonal distribution that is advised for Bromoil. Here we have the fullest possible extension of the range of the middle tones. A small amount of dense black remains as the high-light accents. And there is the *added* range of clear glass (in the shadow accents).

These "accents" are small and crisp. The high-light accents represent complete, or nearly complete, reflection of the illumination. They occur naturally at the points on curved surfaces nearest the light source. The shadow accents, on the other hand, represent the portions of the image at which there is complete, or nearly complete, absorption of the light. They are frequently adjacent and complementary to corresponding high-lights.

In a negative of the quality shown in Figure 4C, a face illuminated by the Basic Light would probably show these accents at the following points:

High-light accents

The eyeball (*one* accent in each eye)

The teeth

The finger nails

Jewelry

Highest sheen of blond hair

Portions of rounded flesh nearest source of illumination

Shadow accents

In cornea immediately below upper lid

Spots in nostrils



Fig. 5. Customary position of highlight "accents" (Basic light).



Fig. 6. Customary position of shadow "accents" (Basic light).

Under corners of upper lip
 Small openings between strands of hair
 Other *small clean* shadows throughout image

The customary position of these accents is shown in diagrammatic fashion in Figures 5 and 6. In order to show the accents clearly, their effect is of course greatly exaggerated.

A negative of the quality shown in Figure 4C gives, with effective placement of these accents, an effect of vitality, crispness and sparkle that cannot be otherwise obtained in photography. The precious elements of black and white, instead of being squandered in huge empty shadows and in bleak expanses of over-exposure, become the bits of condiment that lend zest to the whole.

We may justly liken such a negative to the newer developments in sound recording. Such negatives as the A and B types in Figure 4 are analogous to the phonograph records of twenty years ago—flat, tinny and false, because they registered but a *small portion of the range* of musical sounds. Modern electrical methods have greatly extended this range. Such a negative as Figure 4C represents, in the field of photographic rendering, an effort at obtaining "high fidelity" and "full range recording," the complete attainment of which will undoubtedly be one of the most important of future developments in photography.

The Fourth International Salon Of The Pictorial Photographers Of America

J. T. Morey

WELL, gentlemen, the truth is out at least. All is not peace and harmony within the ranks of the noble army of photographers of the world. For lo! these many years the exhibition committees have been trying to conceal it by suppressing one side or the other, but now the P. P. A., after much searching of soul, no doubt, has admitted in public that pictorialists and purists do not like each other; in fact, they are on the one hand fakers, phony artists and violators of the medium and on the other mere mechanics, cold-blooded dishumanitarians and no gentlemen. So we've up and put them in different classes with different judges, on opposite sides of the room, where their respective devotees can ignore each other in peace.

The P. P. A., true to its name, is still predominantly pictorial, and so is the Salon; it has been suggested by certain interested parties that pictorialists are the only people who have time to send things to salons anyway; the rest of us have our work to do. I imagine this can be disregarded as propaganda. We are even treated to a small exhibition of the work of the founders of the Society, done twenty years ago, led by the great Clarence White.

These prints were made in the aftermath of the Photo-Secession, when photographers still had the idea that the older forms of art were on the skids and that the camera was going to step into the breach and save the world from materialism and the machine. This high quest must have weighed on them terribly; their work has an underlying grim seriousness and an overlying rich, ripe beautifulness which is rather crushing to the poor proletarian who has never gone in very extensively for the finer things of life.

Three prints by White are exhibited, enough to prove, if nothing else, that he could do more things with a piece of platinum paper than any man that ever lived. These pictures have that lovely brownish-black tone and incredible richness that will probably never be seen again, to judge from

the present price of potassium chloroplatinite, which hovers around \$1.75 for fifteen grains (if anyone knows where you can get it cheaper wire me collect and we'll start a Platinum Reaction). Subject and style and content are things that perish, though, and the intervention of the war and the Mencken era make Mr. White's simplicity and sincere solemnity seem just a little ridiculous. "The Fourposter" reminds me of equal parts of Vermeer and the Pre-Raphaelite school (why is it that styles in photography are always fifty years behind styles in painting?), and his nude study is too beautifully indistinct for this workaday world. And this leads me to believe that, as a man with a camera cannot be all style and content, he might as well have no style and content if he wants to be taken seriously by the next generation. Matthew B. Brady is still considered one of the greatest American photographers simply because he did not bother to be either handsome or edifying.

Usually nothing is so dead as last year's photograph, and you seldom see it. This little retrospective exhibit gives a rare opportunity to compare the work of some of the old-timers today with what they were doing twenty years ago. Some of them have changed and some have not. Edward Weston, who is as honest as his lens and apparently always has been, was an F64ist in 1922, when he did the factory in "Ohio." The only difference in approach between this print and his "Wind Erosion, 1936" is that the former is in warm tone on platinum paper and the latter is bromide.

Karl Struss, on the other hand, is considerably more honest than his lens, the dread Struss Pictorial. Apparently he still uses the damn thing when he gets a chance, for his "On the River, 1909" and "In the Harbor, 1937" are both carefully decomposed. I am only thankful that the limitations of the cinematographic process will not permit Mr. Struss to unleash this deadly weapon on the public. It has a most uncomfortable quality of diffusion, full of leering reminders that all flesh is grass and we'll all look this way six months after death. In another section of the exhibition are two more Struss prints done in his later or Hollywood style, "Papaia" and "Primeval Forest Fog," which is quite pure and looks remarkably like a primeval forest-fog, or at least a movie-set of one.

Then again we have John Paul Edwards, who has progressed all the way from the voluptuous prettiness of the "Beach in the Cove, 1917" to the purist austerity of "Port Anchor, 1937," and Dr. Ruzicka, who has come along from the excessively luminous Penn Station of 1917 to his present Third Reich style.

The others follow White pretty closely, using control processes for their inherent surface quality and apparently having no feel for the surfaces of things. Jane Reece of Dayton, Ohio, did in those ecstatic days an attempted universalization called "Lorado Taft, The Man and His Work," after Steichen's "Auguste Rodin," which to me represents everything that a photograph cannot and should not be made to do; in it you can see what the old pictorialism was and the new largely is. The camera has been made to represent something which is not there to be seen, a concept in the mind of the operator. This means that the photographer considered herself an artist, and looked on her lens and chemicals as instruments for the expression of her own feelings. The trouble is that the



"Donald"

Edward Quigley

*4th International Salon of the
Pictorial Photographers of America*

camera has, if not a mind, at least an eye of its own, and these two things are incompatibles, one telling what is there, and the other why it is there. The photographer had to fight the medium all the way, and the result is that she has suppressed the photographic definition into meaningless masses which are supposed to be expressive but still retain enough of their machine-origin to startle with small incongruities; and the spectator trusts neither the integrity of the artist nor the disinterestedness of the machine.

Pictorialism has sifted down considerably since 1917; from the pursuit of a few devoted intellectuals it has become the next step up for the assiduous snaphooter. The pictorialists of today have no such high aspirations as those of Clarence White, and no such aesthetic sophistication. Apparently they have no better reason for photographing than to amuse themselves. They are still burdened, consciously or not, by the idea that they are artists and entitled to express themselves with a camera; the titles alone are enough to prove this. Nobody calls a picture "Tranquillity" or "Innocence" unless he thinks he is picturing some concept of his own. This attitude also gives the operator free rein in the little matter of retouching and control, which is usually considered the basis of the pure-pictorial controversy. Really retouching is of no importance in itself; the question is whether the photographer has the power of life, death and the high and low justice over his medium and can put any amount of freehand work on it so long as the result is pretty, or whether modification after the fact only destroys the unique quality of the photograph, absolute objectivity, without making it a real means of expression.

Well, the keynote for the pictorialists is given by the great men who are hung in the Honor Division at the salon. First we have the Belgian master Leonard Misonne, the foremost exponent of the oil process. He is a primitivist; his prints look like old French calotypes of about 1840, or engravings by Gustave Dore. He is reported to have said "The subject is nothing, the light is everything," and proves it in "Breeze" by showing a group of children with no faces simmering mysteriously along a disembodied beach. My own feeling is that light should be left alone; pending suspension of the laws of nature, it can be trusted to take care of itself.

At the top of the American workers is Dr. Max Thorek of Chicago. His medical training has made him one of the three or four photographers in the world who can turn out a good nude; amid the welter of coy open-air nudities and writhing studio-studies, his work almost alone shows an understanding of what makes the human body work. Unfortunately, he seems rather to be ashamed of this knowledge than proud of it; it is hard to see how, after cutting people open all these years, he can turn out such sentimental banalities as "Despair" and "A Critic." The technique is as good as you can find, if you like paper negative work, but the Doctor must know as well as anyone that persons in despair do not assume such impressive and uncomfortable postures as that of the woman in the picture; they are more inclined to walk about and do funny things with their hands, in spite of the conventions. Furthermore, I find it difficult to see just how Dr. Thorek can claim to be a photographer at all; the image on the negative seems to get in his way more than it helps; all the stuff on the print comes from the shoe-blackening or whatever it is that he puts on the back of the P. N. He might just as well throw away his camera and go at it with the



"Daybreak"

Ferenc Csik

*4th International Salon of the
Pictorial Photographers of America*

charcoal, and more power to him. But perhaps, if I may adopt the vile habit of psychoanalyzing people for a moment, all this simply represents the Doctor's romantic escape into unreality from the demands of science, and he doesn't really care what he does. As for me, I think all such attempts to be sombre and terrible in a photograph end by being faintly ridiculous. A painter may paint with a passionate brush-stroke, but what of a passionate paper negative?

In spite of the wise precautions of the committee, the question of what is purism and what is the other thing has been left up to the contributors, with the result that such eminent illustrators as Margaret Bourke-White and Fred Korth are represented in the pictorial division, looking much out of place. Miss Bourke-White's "Wind-Tunnel Construction" is about

as straight and documentary a picture as can be imagined. The very fact that she calls it that instead of "Speed!" should have been enough to put her with the pure.

But even where the technique is perfectly straight, as it has to be for the miniature camera boys, these exhibitors seem to lack completely the ability to see beneath the most superficial aspect of anything. The "modern movement in photography has become identified in their minds with a picture of a building or a power line or some such machine-age subject, taken from an odd angle; so whenever they want to prove that they can be advanced too, they automatically fall into these well-worn grooves and turn out such things as Navara's "Promenade's End" and Hammond's "Radio City," which I should call fake modern. They do not understand the implications, as such men as Sheeler and Dmitri Kessel do. And there is an army of workers hung here who still cling to the moth-eaten idea of art for art's sake, following in the footsteps of Fassbender and many another, trying to find a non-existent formula for beauty in traditional elements of design like the ogee-curve, making the most superficial kind of originality nine points of virtue, thinking that to do a new thing badly is better than to do an old one well. We have people like Christine Fletcher and A. B. de la Vergne who treat light as if it were a state of visibility instead of the thing that the lens sees; one would think that X-rays and infra-red photography of hot irons in dark rooms would have been enough to demonstrate to them that as far as the camera is concerned, matter is nothing but light in a state of diffused reflection.

It seems to be impossible to find a good straight portrait of an ordinary human being any more; you have to be an eighty-year-old Indian or a burlesque dancer to rate. The only photographer shown here who was willing to take the risk of being accused of conventionality is Edward Quigley with his very fine portrait, "Donald." This, except for a faintly modernistic background reminiscent of Mr. Quigley's smoke-ring photographs, is a thoroughly traditional arrangement so well done that it carries its own novelty.

The European workers, in spite of what we hear about blood-purges in Germany and civil wars in Spain, seem to be on the whole a more light-hearted bunch than the Americans. The Czechs, Hungarians and other Central Europeans in particular go in so heavily for shots of young girls and children dancing in their native costumes that the whole exhibit might have been labelled "Visit Sunny Hungary." Perhaps the governments are behind it all, trying to stimulate the tourist trade. The "German Style," which is much straighter and more modern than the average American style, is the rule for most of it. There is also less preoccupation with design than here; a good many of the pictures seem quite chaotic to me, but a Hungarian, Ferenc Csik, turned in the most startling composition in the show, "Daybreak." To H. Berssenbrugge of Holland goes the credit for the number one atrocity, "The Gateway at Harderwyk" which is printed by some esoteric process on a thin panel of wood with the grain showing through, and looks decorative, awful, and like a Willy Pogany movie set.

The small exhibition of "Basic or Modern Photography" contains the



"Wagon Wheel"

Alma R. Lavenson

*4th International Salon of the
Pictorial Photographers of America*

only things here which can really be called photographs in the strict sense. On the one hand we have pictorialism which is a medium of expression of some sort, however inadequate, and on the other illustrative photography for publication which consists mostly of stage designing and lighting. But in the work of Weston, Edwards and Anton Bruehl we have the fundamental problem of an object in natural light and a lens image. This sort of work can be called perceptual, dealing only with the things that are visible to the sensitive plate as against the conceptual work of the pictorialists, which drags in aesthetics and expression. Sometimes the purists use design elements, as in Alma Lavenson's "Wagon Wheel" or Ralph Young's "Pattern," but they are always designs found actually in nature and played where they lay.

The section is small and hardly representative; there is no sign of the four great purist saints, Steichen, Steiner, Sheeler, and Strand, and Edward Weston has only one print. This, however, is startling enough to make up for a good many. In the background is a typical Weston landscape, naked and forbidding; all right so far, but right in the centre, apparently about two feet from the camera, is a large sea-shell which is rendered so sharp that it seems to be sitting on top of a mountain about a hundred miles away and looks about that many miles high. It reminds me of some of Salvador Dali's Surrealist paintings. If it were anyone but Weston, it might be an accident; as it is, we can put it down as rather ghoulish humor.

The Bruehl brothers, Martin and Anton, have six prints between them, including two superb landscapes by the latter and two of their famous color-prints, so subtle that at the first glance they seem to be in monochrome. Thurman Rotan demonstrates how you can make an excellent picture out of a prosaic subject without resorting to bromoil with his two landscapes containing old houses. J. P. Edwards has four prints of the extreme F64 type with tremendous emphasis on pattern and texture.

Fred Korth of Chicago, who was also represented in the first section, is more in his element here. His studies of eggs and wet bottles render the texture beautifully; his "Portrait of a Cat" is about the sharpest thing I have ever seen. Every hair shows up almost in relief. Aside from this, I think it is a mistake to get so close to a cat that nothing is visible but the head; animals, unlike humans, express more individuality through body rhythms than through faces. This is particularly true of cats, which are the most graceful and lithe animals there are; Korth's cat, however, looks very chunky and solid and not a little clumsy.

Illustrative photography, shown here in a separate class, is similar in method to pure photography, but the illustrators have to take into account first of all the selling power and impact of their pictures. The result is a good deal of faking, a lot of dramatization which seems rather hammy out of context, and an enormous use of props.

Lejaren Hiller, the dean of illustrators, has entered his unfortunate Chinese scholar urging advertisers to buy space in Scripps-Howard papers and be sure of getting their products before the public. In this and in both his other pictures the problem is not primarily one of photography but of arranging the models; it is much like that of a stage-director. "Street Scene, Madrid" is exciting, but not very convincing.

Slight phoniness is typical of most of the work. Rittase' "Blocked



"Neglected"

J. A. Partington, Jr.

*4th International Salon of the
Pictorial Photographers of America*

Kick" is far too good to be a real action picture from a game, and I wonder whether the burning car in Emanuel Weil's "Accident" really was the result of an accident. Sometimes record work is combined with a highly decorative character as with Dmitri Kessel's "The Bridge" with its typical disturbing diagonal, Paul J. Woolf's "Modern Interior," and William Winter's "Device for Testing Springs."

There is a good deal of the conventional fashion plate work of the New Yorker and Vogue type like the shots by Wynn Richards and some back-cover color work by Paul Hesse, far more garish and far more striking than the work of the Bruehls. The ultimate in impact is provided by Luis Lemus' nightmare montage, a series illustrating "Crime and Punishment"; I suppose he means the movie and not the book. A saving touch of humor comes from John Partington's "Neglected," which I take as a satire on the fashion picture, with its spotlighted fabric surfaces and "modern" background.

The place to get real human interest is not in art photography but in the work of the press cameramen. I have never seen anything so amusing as the expression of delight and astonishment on Schmeling's face in William Eckenberg's shot "Max Schmeling Knocks Out Joe Louis." There are a dozen or so really great pictures like this one in the small section of Press Photography, diluted with a great deal of polo and visting celebrity.



"Harvest"

Erno Vadas

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The show winds up with two sections of scientific illustrative work, labelled Science and Natural History. The pictures in Science may be highly interesting for those in the know, but to the layman they are either utterly incomprehensible like C. B. Anderson's shadow-pictures of electron-showers, done at Cal. Tech., I believe, or rather disgusting, like the medical records of Busanovitch and Harding. The much-publicized millionth-second photographs done by Harold Edgerton at M. I. T. turn up again with a flying bullet and a splash of milk, done in series.

The Natural History section fails to be scientific. Most of the stuff is done by ordinary photographers who have wandered off into botany. For instance, Ira Martin has a very beautiful shot of a bunch of leaves, elm leaves, I think, but he rather gives himself away by calling it "Plant." It's a very nice picture, but I don't think it will gain Mr. Martin much credit in botanical circles. There is no work by Brownell or Pack or any of the gentlemen who work for the National Geographic Magazine. Edgerton turns up again with a picture of a hummingbird done with an exposure of 1/100,000 of a second. It shows the wings of the bird absolutely motionless, which apparently is something, but it needs a bit of explaining before it seems very remarkable to the uninitiated.

This salon is probably the most satisfactory held in recent years for the simple reason that it gives an opportunity to photographers of widely differing ideas without being unfair to anyone. If there must be pictorialists, I can only hope that the idea spreads.

Photographing Eyes

Alda Jourdan

CONSIDERATION for expressive portrayal means that thought should be centered upon expression as an objective. The technical steps necessary for this accomplishment are used subserviently to the main intention. The portraits which appeal to us the most strongly are those which have real value as likenesses of natural expression. Expression is delineated by the forms of the face, which include the features. It is generally agreed that the eyes are the most expressive feature. Eyes always attract and hold the main interest, and are the main keynote in explaining expression. The eyes then must be given the greatest consideration by the one recording the portrait, and we can say that they are the feature of the face that is most responsible in determining the all-important instant of camera exposure.

The eyes always have been the photographer's guide and special care, but today there is a more careful consideration for their naturalness and special moods of meaning. Heretofore the external appearance has been carefully preserved, and now it is the expressive moment which explains the inner nature of the individual that we try to record. In speaking of the feature here we mean the eye and closely associated parts such as the part of the eyeball in view above and below the opening, and the eyelid.

If the main idea is to convey a particular expression, it is very apparent that any pose, position or general direction of the eye is acceptable, and also that all of the different positions produce a particular meaning or expression. Rather than endeavor to have eyes look in a certain direction, or convey what might be termed a neutral expression, we now try to follow and record every special move or direction they naturally take. The thought or attitude of the model at the moment of recording is very clearly read by the direction and expression of the eyes.

All of the surrounding parts have a direct bearing on the likeness and

expression of the eyes. The lower eyeball is especially important. There is a noticeable difference in the formation of different persons' eyeballs, which is always a key to likeness. The age of a person determines the shape and drawing of the eyeball, and the expression of the instant governs the forms presented. If the lighting is well balanced the natural shadow formed by the structure of the eye will model it properly and should not be removed or smoothed out by retouching, for in so doing much of the particular likeness and exact meaning of the expression is obscured. If the lighting is not sufficient to portray appearance and there is need of retouching, it can be done by softening the whole but not destroying the gradation of tone which draws the shapes.

The eye presents a different appearance according to the expression, which in turn is governed by the motivating thought of the model. An expression of surprise or amazement opens the eyelids wide, and an expression of extreme merriment narrows the opening of the lids. All of the varying expressions govern the size and manner of opening of the eyelids. We find that when these mannerisms are recorded exactly as they appear, a wealth of natural beauty is pictured. If the muscles and lines around the eyes are well defined, the likeness is retained even though the iris is turned or covered from direct view.

The vividness and intensity of expression is shown in the actual iris and pupil, which brings us to the consideration of lighting. The moisture and roundness of the eyeball is particularly attractive to light, and causes concentration in spots of intensity known as catch lights or highlights. This is called the highest light because it is the whitest light in the picture. When simple lighting is used to light the face, there will be one highlight. When light falls on the eye from different directions there will be two and sometimes more. We find that the eye moves faster or more often than any other part of the face. A very slight motion will slur the highlight and cause it to appear larger and duller than it should. Therefore it often occurs that highlights need to be slightly retouched, and their proportion in relation to the eye corrected.

There are times in which an expression can be greatly helped by retouching the eyes. A stare can be overcome by bringing the lids closer, principally lowering the top lid. The line may be etched closer to the iris, removing the former one with the retouching pencil. Or if it is necessary to open the eyes more, this is done by pencilling back the upper lid and etching a new shadow line.

The general guide for photographing eyes is to select a negative emulsion that will best render the color of the iris, and then to expose at the most expressive moment, and finish the negative and print with care for good quality and gradation in order to preserve the modeling of the eyes in the various attitudes and poses which picture expression.



Alda Jourdan

Stopping Extraneous Light

Albert Ervin Thompson

MULTITUDES of negatives, many more than most photographers realize, are spoiled every day by that sneak thief and double-crosser of photography, Extraneous Light, who, finding all side entrances to the precious film closed by careful camera manufacturers, boldly enters through the front door of the camera, the lens, unseen and usually unknown by the trusting cable-pusher who opens the door to let the picture-light flow in. This frustrated enthusiast, when he sees the spots, flares and halos masking his favorite scenes, is inclined to blame the bellows, the filmholders, the safelight, or in fact everything except the usual cause of such phenomena, which is *focused* light reflected to the film by some smooth surface of the camera's interior. Also, less conspicuous defects, such as fogged shadows, degraded details, and generally flat and "overexposed" effects are caused by the same light more or less evenly diffused over the surface of the film. The source of the light may be the sky, the sun, a body of water, or any bright object within the view of the lens but outside the picture field intercepted by the film; by stopping the light before it reaches the film, one can improve the snap and brilliance of his negatives, increase his range of choices of exposure and development times, and reduce his percentage of failures due to fogged film. Two ways suggest themselves, both of which must be used for complete success.

A good lens hood, especially adapted to the lens and camera in use, can be very helpful, though bulky to carry around; but a poorly designed hood may be worse than none at all. There are many entirely unsuitable hoods on the market, and still more that have been home made by their owners; the bad results obtained with them probably account for the fact that some writers on photography depreciate the practical value of lens hoods. On the other hand, many advocates of lens hoods seem to have overlooked the fact that no EXTERNAL hood can be made to frame out ALL the light approaching the lens from outside the picture field, but only that coming from outside a certain angle to the axis of the lens, this angle being determined by the diameter and focal length of the lens and the size of the film in their relation to the length of the hood. The residue of extraneous rays

which pass through the lens can and should be captured by light-killing devices inside the camera, which become in effect, INTERNAL hoods whose action is complementary to that of the exterior sunshades. With both in use, the image projected to the film may be framed in complete blackness.

Light-killing devices become of the greatest practical value when one wishes to shoot "against the light." I am one of the many whose preferences run to those contrasty back-lighted scenes of wind-blown cypress against a sun-flecked ocean, of gracefully pendent sugar pine cones framing heavens of bright cirrus clouds, and of darkened sails intercepting reflection paths from the rising or setting sun. Happy was I the day that I acquired for only forty dollars an ancient reflex box and started forth to capture on film the moods of transient light; sore and grieved I became when ten of my first twelve shots turned out like accidental exposures of the blowing up of a munitions factory. "Light leaks," I said, and was partly correct. During the next two years I added new bellows, shutter curtain, Graflex back, film magazine and holders, and home made lens hoods by the half dozen, but through it all the light struck negatives continued to appear, though reduced in proportion. Then one evening I made some discoveries that have enabled me to trap, throw and hogtie old Extraneous Light, who is destined not to trouble me further.

While watching the ground glass to determine the "cut off" point of an extensible lens hood I had made out of two pasteboard mailing tubes, I aimed the lens in the direction of a bright lamp; there appeared on the ground glass a flare of light, though the lens was shaded. When I removed the hood from the lens, the flare disappeared; when the hood was replaced, the flare reappeared. Clearly this narrow cylindrical hood, though painted velvet black on the inside, reflected more light into the lens than it excluded, thus doing more harm than good in a situation where protection was most necessary. Experiments with other shapes of hoods led me to believe that the flaring, funnel-shaped ones were almost equally unsuitable and for the same reason. Most other types are helpful when properly used.

Without a hood, one may improve his chances for successful back-lighted pictures by shading the lens with his hand, hat, or safety slide, but for narrow angles this is unsatisfactory because of the danger of "cutting off" part of the picture without being aware of doing so. The procedure adds one more detail to be attended to at the moment of taking the picture. With a properly designed hood on the lens, one can be sure of maximum protection with no danger of cut off, and can give his whole attention to posing, composing and taking his picture. The hood has the further advantage, in bad weather, of shielding the lens from rain, snow and mist. The cutaway type of hood, shaped like an inverted sugar scoop, offers good protection from the sun without danger of setting up reflections, but gives no protection from the light of glittering snow, rocks and bodies of water; it is adequate for most situations. The wide square hoods with straight sides offer additional ground protection, but should themselves be shaded during exposure to prevent reflections. Better still is the deep, roomy hood having a narrow rectangular front aperture, with a hinged shield to shade the aperture. Most efficient of all, however, is a type of hood I have

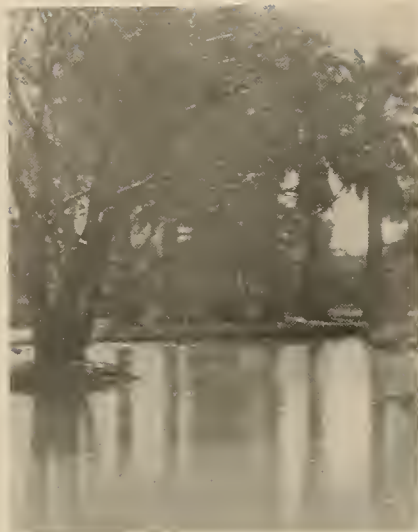


Figure 1 was photographed without the use of a hood, the sun being allowed to strike the lens.



Figure 2 was taken under the same conditions as figure 1, except that a good hood was used.

designed for my own use; its capacious interior is divided into several parts by a series of cross partitions, one behind the other, each with a rectangular window or aperture of appropriate size framing the field of view. The deep, dark recesses between the partitions effectively absorb all incident rays that enter the hood from outside the picture angle; to accomplish this result the partitions are placed so close together that when the hood is viewed from behind through the lens no illuminated portions of the side walls are visible.

A really effective hood for shots close in to the sun must be a rather bulky affair. Because the longer the hood the greater the efficiency, other dimensions being proportional, and because even the deepest ones are not one hundred per cent effective, one's choice of hood sizes will depend upon how closely into the light he wishes to aim his camera, and be limited by the bulk he is willing to carry around. To illustrate with a specific case, suppose we are using a lens of five inches focal length and one inch in diameter with a film $3\frac{1}{4}'' \times 4\frac{1}{4}''$ in size with hoods of various lengths, each having a front window to exactly frame the field of view. The angles at which we may sight the camera toward the sun without harm now become:

Without hood or other shade.....	90 degrees
With hood $1\frac{1}{4}$ inches long.....	48 degrees
With hood $2\frac{1}{2}$ inches long.....	34 degrees
With hood $3\frac{3}{4}$ inches long.....	29 degrees
With hood 5 inches long.....	26 degrees

After five inches the advantage gained by longer hoods is in this case negligible. A little diagramming with pencil, ruler and protractor will show



Figure 3 was exposed through a hood of the narrow tubular type painted dull black inside.



Figure 4 was taken through a properly designed, reflection-proof lens hood.

The same stops, shutter speeds, sensitive materials, printing and developing times were used for both pictures in each pair. The differences are due solely to the effects of the lens hood used. Take your choice of the results.

the accuracy of the foregoing conclusions and bring out the principle that the longer the focus of the lens in relation to the film size, and the smaller the maximum diaphragm stop, the more efficient hoods can be made for backlighting at smaller angles. This becomes of importance in those cases where the only available camera positions are those facing the sun, as it sometimes happens when filming water events from the shore; use the longest focus lens available and hood it to the limit.

In the case of my reflex camera, previously mentioned, it became necessary to do something about the extraneous rays the hoods could not exclude. By pointing the camera, with the back removed and the lens open, toward a bright light and moving it about at various angles, I found that the focused light, far from being absorbed by the dead black surfaces of the camera's interior, was reflected and diffused freely in the direction of the film by several smooth, flat surfaces. The broad under side of the reflex mirror carrier, the side plates that protect the focal plane shutter mechanism, and the box-like housing of the shutter curtain were all to blame. The complete cure of the trouble came after I contrived to cement little strips of black paper, folded in a channeled L shape, on and in front of the offending surfaces in such a position as to intercept and absorb all slanting light that struck there. The paper leaves or partitions vary from one eighth to three eighths inches in height, not high enough to cut off any part of the picture, but just barely avoid doing so when the lens is racked out to full extension. Since shielding the camera's interior in this manner and using

DIAGRAM OF PARTITIONED LENS HOOD Longitudinal Section on Lens Axis

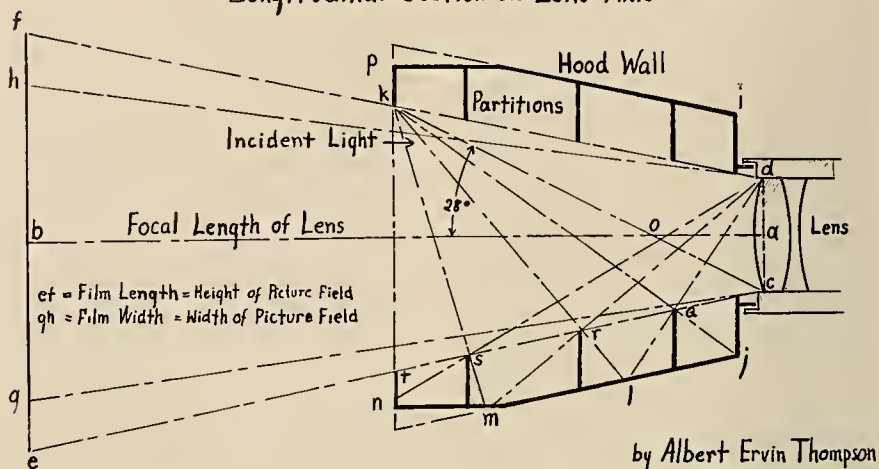


Fig. 5

the deep lens hood as described, I find it possible to make exposures almost directly into the sun without the usual clumsy precautions and without danger of fogging the films. Probably most cameras of current manufacture, particularly the folding ones with generous folds in the bellows, have their interiors sufficiently reflection-proofed, but to make sure in the case of your own camera or one you are about to purchase, look inside and apply the test of light.

How to Design a Hood for Your Camera

The sizes of the hood windows, in relation to their distances from the lens and the size of the film, are important. If the windows be too small they will vignette the edges of the picture or decrease the marginal illumination; if too large, they will not reach maximum effectiveness. Fig. 5 illustrates how to diagram the hood on paper so the window sizes can be obtained with sufficient accuracy by direct measurement. No dimensions are given, as it is intended that the reader will obtain dimensions from his own lens and camera. Given the appropriate measurements and a threaded brass tube to screw into the front of the lens, any good tinsmith or pattern maker can construct a suitable hood to order.

Draw line *ab* equal to the focal length of the lens; at right angles to *ab* draw line *cd* equal to the diameter of the front lens, and line *ef* equal to the length of the film; mark off *gh* equal to the width of the film. Draw connecting lines *ec* and *fd* which establish the angle of view intercepted by the film length, and lines *gc* and *hd* which represent the angle subtended by the film width. Now plan the size of the hood as you prefer, using these lines as guides for the inner dimensions. Suppose we now decide to construct a hood long enough to shade the lens when used at an angle of 28 degrees to the sun's rays. Draw line *ck* crossing *ab* at this angle at point *o*.



Fig. 6. Partitioned hood for 7 inch lens, on a $3\frac{1}{4}$ " x $4\frac{1}{4}$ " reflex. It shields the lens from all light from outside an angle of 28 degrees to the lens axis. This lightweight hood, made of black cardboard, black film papers, gummed cloth mending tape, and paper cement, slips on over the lens mount. More lasting and reliable, especially on windy days, would be a light metal hood with a threaded tube to screw into the lens mount.

Point k will then mark the location of the top of the front window. The height and width of the hood is also a matter for arbitrary choice; the wider the hood the fewer the cross partitions necessary to shade its interior. Suppose we draw the side walls ip and jn one half inch above and below lines df and ce respectively, and parallel to them, giving our hood a tapered outline. Now to locate the partitions where they will do the most good. Draw line jk intersecting line ce at point q, which marks the position of the rearmost partition. Draw line dl through point q, then kl intersecting ce at point r, which is the proper location for the second partition. Draw dm through point r and km which locates the third partition at point s, which happens to be enough in this particular case. These lines now demonstrate that no light striking inside the hood can be reflected to the lens, because all of it is stopped by the low partitions. Draw the partitions at right angles to the lens axis ab.

When fitting hoods to very short focus lenses, such as cine and minicam lenses, slight inaccuracies in the measurements or construction of the hood may result in serious vignetting of the picture. Therefore, to be on the safe side in such cases the hood apertures should be made a little larger for hoods of the same length than would be indicated by the foregoing directions. An increase of about 10% should be a safe allowance. If the camera permits the use of a ground glass in the focal plane it is an easy matter to test the cut-off of a certain hood aperture at different distances. Cut an aperture of the size to be tested in a sheet of black paper, mount it on a pane of glass, center it in front of the lens, and illuminate it from behind. Now view the image of the aperture on the ground glass. **WITH THE LENS FOCUSED AT INFINITY AND STOPPED DOWN.** Move the camera back and forward until the whole picture area on the ground glass is illuminated with no evidence of darkening at the edges, then measure the distance, hood aperture to lens. Be sure the lens is set for infinity, as at this setting it includes the widest field.

Cinema Section

Edited by

William A. Palmer

Cine Flivvers

LITTLE more than six months ago the Universal Camera Company put their Univex 8mm camera and projector on the market. It seemed impossible that a usable movie outfit could be sold complete with motor driven camera and projector for under thirty dollars. But the cameras have been selling in huge quantities. The skeptics who felt that a camera for ten dollars and a projector for fifteen could not be more than toys of sheet metal stampings which would soon wear out even if they did work at the start, were agreeably surprised to find well designed, simplified units of die cast construction, well ahead of the quality that might be expected for the price.

The Univex camera and projector, because of their extremely low price and maintenance, have opened up the pleasures of movie making to a large mass of people who could never before be persuaded to invest in the more expensive outfits. The situation is similar to that created by Henry Ford in the automotive field in the early days of the model T so that the Univex can be called the flivver of the movie field. It is built to sell in large quantities to make satisfactory movies under certain conditions at film costs to which no one can object.

The fears that certain people may have had, that the quantity sale of the flivver cameras would hurt the sale of the more expensive and versatile 8mm and 16mm equipment, have not materialized. Indeed there are indications that the sale of advanced equipment may be eventually greatly stimulated. For, along with the great class of Univex owners who would buy no movie outfit if it weren't for the low price, there is a large group of people who are starting out with the flivvers and will "graduate" to the more elaborate cameras as their skill develops and they find the desire for shooting pictures under more adverse conditions and in natural colors. This is particularly true of the kids who are using the equipment for pleasure in recording their activities of the school years. These super-enthusiastic filmers will not be content for very long with the scope of the flivver but continue to change and improve their equipment until they acquire turrets and tripods. Like many other hobbies, when movie making hits early in life, it becomes firmly attached.

An entirely unexpected sale of Univex equipment has been made to owners of 16mm equipment who use the little cameras for pure unrestrained pleasure filming. The large cameras with their fancy gadgets capable of producing professional appearing results are too cumbersome to take along on an informal picnic or other social activity where serious movie making doesn't fit in. Furthermore, six dollars a roll for pictures of our friends acting foolishly is pretty high when such films have such a temporary value. They are screamingly funny when the group involved sees them for the first time but hardly of lasting interest. So

the serious filmer in moments of relaxation can take his little Univex and have a regular snap-shooting orgy without worrying about the expense.

A very serious use too can be made of the Univex camera. The investment in the camera is small, so it is possible to keep one in your automobile at all times, ready to record some unexpected event. This would be particularly valuable for insurance and real estate men who often run across unexpected picture opportunities of interest in their businesses. The insurance man could make good use of shots involving fires and accidents of one sort and another. Along this line is the logical suggestion that all police cars and motorcycle officers could be equipped with a camera to record evidence in accident cases. In many instances moving pictures can show conditions and persons involved in an accident much better than could stills, and an investment of ten dollars for each squad car or motorcycle should certainly be able to be made without a lot of red tape or special appropriations.

The Operation of Univex Equipment

The general operating technique for Univex equipment is very similar to that for other movie cameras with only slight changes in certain details of manipulation. The Univex camera uses "straight" eight film which means that the thirty foot roll of film is only eight millimeters wide and is run through the camera once as contrasted to the "double" eight cameras using Eastman film which is run through twice for complete exposure. The precaution of loading the camera in subdued light is particularly important with the "straight" eight film of the Univex because a very slight edge fog will encroach on the picture area and show on the screen.

Because the camera is so extremely small and light there is even more than the usual temptation to spray the landscape in wild panorams. Moving the camera except to follow moving objects should be absolutely avoided or the resulting pictures will have a very disturbing "dither."

Practically all the disappointing results obtained with the equipment can be traced to attempts to use it under conditions too exacting for the lens to record. The regular f 5.6 lens will get good exposures in direct sunlight and in bright open shade but will not get a picture in deep shade under trees or cannot be used for interior shots with or without artificial lights unless they be available by the dozens. Yet it is surprising how many Univex owners will attempt to photograph scenes on the darkest of days and at night without even so much as a single photoflood added to the regular room illumination. One must remember that the camera has a limited scope, comparing in its abilities with the more expensive outfits, as the box brownie still cameras compare with the super-candid cameras and their big lenses. It is this limitation, that the camera can only be successfully used under good light conditions, that makes it so valuable for the non-technically minded persons who become bewildered by exposure meters, variable speeds, and interchangeable lenses. If they can remember to use the camera to photograph scenes in sunlight or in bright shade and then hold the camera steady while it is running, they can hardly help but get good pictures.

Eight millimeter film cannot record detail so well as can 16mm film and so it is the close-up that should be made most of the time. A shot made from a distance of four to six feet showing friends, children, or pets in action will be worth a dozen taken from a distance of twenty five feet or so. But when making close-ups there is a precaution that must be taken. The finder of the camera is adjusted to show the view as correctly as possible for all distances and in extreme

close-ups the finder becomes inaccurate and the photographer is apt to cut the tops of his subjects' heads off. This difficulty can be avoided, however, by remembering to sight the camera with plenty of space above the heads of the subjects when they are photographed in close-up. In other words point the camera a little higher than the finder shows and the scene will be a success.

One would think that the few points mentioned above would end the list of possible difficulties that might occur when using the flivver equipment, but the camera dealers tell us of all sorts of queer things that people do. It is quite common to find a roll of film in which a number of scenes are all or partly obscured by the finger of the photographer which was coiled around in front of the lens. Every once in a while someone tries taking movies as one uses a still camera, turning the camera on its side when a vertical picture seems to fit the subject better. Another will occasionally confuse top and bottom of the camera and take a whole roll with the camera upside down, and there are also a number of cases on record where whole rolls of film were run without a lens on the camera!

Very little difficulty is ever encountered in using the Univex projector except when too large a picture size is attempted. A twenty to thirty inch picture is about as large as should be shown in a completely darkened room and if there is any light present the picture should be kept down to about a foot wide. As with all eight millimeter projectors splices will sometimes jump and cause trouble if they are not carefully made. A good eight millimeter splice should be as thin as possible (a good plan is to scrape both the emulsion of one end and the back of the other end of the film). Extreme care should be taken in splicing to see that no excess cement spreads out around the splice which might cause the film to buckle.

Film Processing

Unlike other eight millimeter film, the Univex film is sold for a price that does not include the processing. When the film has been exposed it is sent to one of the laboratories and is processed for an additional charge of thirty cents. There are a number of Univex processing stations in key cities and in addition there are many independent laboratories who also will process the film.

Many letters of inquiry have come in recently asking whether it would be feasible to process Univex film at home. The answer to that question is that it can be done but it certainly wouldn't be worth while, for the cost of chemicals alone to process in small lots of one or two rolls would cost almost as much as the regular thirty cents per roll charge and the chances are that the results would not be so satisfactory. Certain adventurous amateurs have attempted to develop the Univex film as a negative in order to make direct titles, reversing the values of black letters on white title cards. This stunt does not work because there is an anti-halation layer below the emulsion of the film which is almost opaque and which does not come out of the film except when it is placed in a reversing bath.

Accessory Equipment

There are a number of different accessories available for the equipment, the ever-ready case being about the neatest and most useful. Two faster lens of the regular focal length and a telephoto lens are also available. The f 3.5 lens which doubles the cost of the camera extends the flexibility a great deal so that the camera can make pictures under more adverse light conditions. The faster f 1.9 lens seems hardly justified since with it the cost of the outfit comes up into the cost range of the "double" eight cameras which can use Kodachrome film.



"Bird Tracks"

Fred G. Korth

Advanced Medal Print

■ Mr. Korth has achieved an interesting combination of textures and movement of line in this picture. The horizontal ripples in the sand impart a rhythmic quality to the picture; the bird tracks set up a movement of line that carries the eye through the picture very nicely; the sand texture is well rendered throughout; and the group of twigs contributes an accent which gives all of these elements a point of departure, so to speak.

Data: 9 x 12 cm. hand camera; $\frac{1}{4}$ sec. at F:32, on Agfa S.S. Pan. Pack; Sunny day at 5 P. M. in June; 11 x 14" print on Illustrators Special.

Second Award

Advanced Class



"Oops! Here It Comes"

John B. Titcomb, Binghamton, N. Y.

■ There is splendid action in this photograph, not only in the figures but in the water as well. The picture conveys a good deal of the shock and exhilaration of plunging into the surf and consequently we can say that it attains its principal objective. The catch lights in the background are rather distracting, especially so at the left of the print. Mostly because of the elimination of the worst of the catch lights the print holds together better if almost half the distance from the left edge of the print to the figure is trimmed away. Notice that such trimming checks a tendency for the eye to slip out to the left along the horizon line. The same result could be attained by reducing the brilliance of the catch lights on the print with the retouching pencil, a very simple operation in this instance.

Data: $2\frac{1}{4} \times 2\frac{1}{4}$ " Zeiss Super Ikonta B; $1/400$ sec. at F:5.6 with GR-5 filter; Agfa Brovira Velvet in Agfa B5; print size 11×14 ".

Third Award

Advanced Class

■ At first glance one would think that this shot was made from an airplane, but since no mention of that appears in the technical data we assume that the picture was taken from one of the surrounding peaks. It is fortunate indeed that sunlight strikes only a part of the bank of fog. If this were illuminated evenly across the print the left side of the picture would be much too weak to balance the remainder. The cast shadow on the left of the fog bank actually makes the picture. The only weakness which we see in the picture is the lack of any very definite center of interest.

The crag in the immediate foreground, the crag just above it and the patch of sunlit fog are all equally attractive.

Data: 6×6 cm. Voigtlander Superb; Skopar F:3.5; $1/50$ th sec. at F:8; Perutz film 10/10 Din; Lifa #1 filter; $11\frac{1}{2} \times 15\frac{1}{2}$ " print on Agfa Brovira.



"Breach In The Mountains"

Slavko Smolej

Ljubljana, Jugoslavia

Fourth Award
Advanced Class

■ This is a technically nice print, but it seems to us that the picture is rather short on subject matter. It is clear from Mr. Downing's title that he intends to say something with this picture. If he had been interested primarily in textures or in design, he would not have chosen such a title. Just what Mr. Downing is trying to say however is not at all clear to us. The presence of the man-hole might lead one to suspect that Mr. Downing's opinion of "Civilization" is not a flattering one, but one can hardly be sure of even that much from the picture itself. It is certainly a mistake to try to make a title instill meaning into a picture unless that meaning is already there to be seen, and seen easily and clearly.

Data Leica Model F; exposure by Photoscope reading on Agfa Superpan film in Champlin #9; 11 x 14" print on Agfa Brovira Velvet hard, in D-72.



"Civilization"

*C. Ansel Downing
St. Louis, Mo.*



"Adagio Sostenuto"

*Don Loving,
Winnetka, Ill.*

Fifth Award
Advanced Class

■ This is certainly a pleasing portrait of the subject. We should like to compliment Mr. Loving for using the paper negative with due restraint, so that the photographic quality of the image is not destroyed. We do feel that the "hot-spot" on the ear at the left is too strong, and tends to distract attention from the face. Considering the direction of the eyes the spacing might be better if we trimmed about three quarters of an inch from the left of the 9 x 11" print and added about one half inch to the right. The shawl is out of focus to an unpleasant degree. We do not mean that it needs to be entirely sharp, but only sufficiently defined to look like what it is.

Data: 5 x 7" Korona View; 10" Turner-Reich lens used at F:8; Defender Portrait film; enlarged positive and paper negative on Defender Velour Black A; local manipulation.



"In the Hat"

Lloyd G. Ingles, Durham, Calif.

Amateur Medal Print

■ One has to see the actual print to fully appreciate this picture for it has a marvelous luminous quality that is extremely attractive. In this picture the emphasis is really placed on the play of light over the materials shown and the variations in texture which are revealed. With that in mind notice how important it is to arrange matters so that the intensity of the light is varied over the surfaces. Imagine how much interest value the picture would lose if the shadows in the upper and lower left were not there. Observe also how a shadow can be used to reduce the assertiveness of a spot that would otherwise be too strong. Consider the black triangle in the upper left. If the edge of the hat were brightly illuminated where it cuts across this dark background, the dark patch of background would become a most distracting spot. The shadow greatly reduces the contrast at that point and consequently lowers the attraction of the spot enough to make it possible to retain it, so that there will be some suggestion of the outline of the hat.

Data: 6 x 6 cm. Rolleiflex; 7.5 cm. Zeiss F:3.5; $\frac{1}{2}$ sec. at F:18, by daylight about sunset in June; Agfa Finopan in D-76; 8 x 10" print on Brovira Glossy, in D-72. Prints will be exchanged with other prize winners in these competitions only.

Second Award

Amateur Class

■ This is more than just a record picture of an operation because the emphasis is shifted from the operation itself and directed to the tense suspense created in the spectators. The point of view is well chosen to achieve that shift in emphasis for it places the operating lamp so that it obscures the most active surgeons, thus helping a great deal to subordinate them to the spectators. What we have here is a picture of the tense atmosphere and drama of an emergency operation, shown through the attitudes of the spectators. From the standpoint of composition the white sheet at the right center is something of a distracting element. Of course it was impossible to avoid it but the picture would be better without it.

Data: 4 x 5" Speed Graphic; 6" Zeiss Tessar; 1/2 sec. at F:4.5, camera held in hand but braced against railing; E. K. Panchro-Press; 8 x 10" print on Gevaert Vigorous Glossy.



"Emergency Operation"

Sydney and Corwin Hanscn, San Francisco



"Adolcsence"

*Haden Hankins
Richmond, Va.*

■ No one but the photographer can ever tell whether or not a particular picture was clearly seen in its final form before the making of the exposure. Consequently we cannot be sure whether a title was made to fit the picture or whether the picture was made to conform to and express the previously realized idea of the title. When the two fit together as nicely as they do in this case however we are inclined to feel that there must have been at least a partial realization of the objective in advance. Aside from the choice of subject, there are three factors contributed by the photographer which cause this picture to convey a heightened impression of that awkward, lumpy, unfinished quality in a face which is characteristic of adolescence. The harsh lighting serves to emphasize the irregularities in the structure of the face and in the complexion, while the unflattering camera angle and the slight distortion (especially evident in the nose) serves to further emphasize those same qualities.

Data: 9 x 12 cm. Nagel; 5 3/4" Hugo Meyer Anastigmat F:4.5; 1/2 sec. at F:16, by bright noon day sun in May; Defender Fine Grain Pan., in D-76; 8 x 10" print on Agfa Brovira Rough, Soft, in D-72.

Fourth Award
Amateur Class



"Symmetry"
Don K. Oliver
San Francisco

■ This is an interesting arrangement and it is perfectly evident that the photographer knew what he was doing when he placed the lower of the two arms in shadow, thus cleverly and properly subordinating one to the other. The print however is much too dark and muddy, which condition prevents our enjoying the picture as much as we would otherwise.

Data: 5 x 7" Eastman View; 7" Goerz Dagor; 3 secs. at F:64, on Defender X.F. Pan. in DK-76; A filter; 8 x 10" print on Defender Velour Black DL, in M.Q.

Fifth Award
Amateur Class

■ There is a happy, lively expression in this little portrait that is very pleasing indeed. The reader no doubt can recall dozens of pictures of this kind in which a stray foot or two, badly foreshortened, popped out inexplicably in the background. So few pictures of babies photographed in this position are free of that fault that we cannot resist the opportunity to compliment Mr. Timby for avoiding that pitfall.

Data: $3\frac{1}{4} \times 4\frac{1}{4}$ " Series D Graflex; F:4.5 Tessar; 1/10th sec. at F:4.5 on Agfa Superpan Portrait in Pyro; $6\frac{1}{4} \times 7\frac{1}{2}$ " print on Agfa Brovira, in Amidol.



"Billy"

Henry E. Timby
San Francisco

CAMERA CRAFT

Monthly Competitions

Scoring for Club Trophy Cups

The following won points for their clubs in the Advanced Class: C. Ansel Downing, for The Camera Clique; Fred G. Korth and Don Loving, for the Fort Dearborn Camera Club; and Slavko Smolej, for the Fotoklub Ljubljana. Only three points are allowed for Mr. Korth's award since that brings his total to 15, the maximum permitted.

The following won points for their clubs in the Amateur Class: Haden Hankins, for the Camera Club of Richmond; Sydney and Corwin Hansen and Don Kirby Oliver, for the E.P.I.C. Pool; and Lloyd G. Ingles, for the Kamera Kranks.

The following prize winners have no club affiliations: John B. Titcomb and Henry E. Timby.

Contributing Clubs

Boston Union Camera Club (Mass.)	Midwood Camera Club (Brooklyn, N. Y.)
California Camera Club (San Francisco)	Miniature Men (Cleveland, Ohio)
The Camera Clique (St. Louis, Mo.)	The Pack Rats (Pasadena, Calif.)
Camera Club of Long Beach (Calif.)	Photographic Society of San Francisco
Camera Club of Richmond (Va.)	Pictorial Photographers of America
E.P.I.C. Pool of San Francisco	Queen City Pictorialists (Cincinnati, Ohio)
Fort Dearborn Camera Club	San Jose Camera Club (Calif.)
Fotoklub Ljubljana (Yugoslavia)	Sierra Camera Club (Sacramento, Calif.)
Fotoklub Zagreb (Yugoslavia)	St. Louis Camera Club (Mo.)
Kamera Kranks (Durham, Calif.)	Washington Pictorialists (D. C.)

STANDING OF CLUBS

Large Clubs Advanced Class

Fort Dearborn Camera Club.....	30
Los Angeles Camera Club.....	16
Fotoklub Ljubljana	14
Photographic Society of San Francisco	11
Fotoklub Zagreb	4
Miniature Camera Club of New York....	2

Large Clubs Amateur Class

Golden Gate Miniature Camera Club.....	4
Los Angeles Camera Club.....	4
Miniature Camera Club of Oakland.....	3
Photographic Society of San Francisco	3

Small Clubs Amateur Class

E.P.I.C. Pool	16
Riverside Camera Club.....	9
Oklahoma Camera Club.....	7
St. Louis Camera Club.....	7
Washington Pictorialists	7
Aluminum Camera Club.....	5
Camera Club of Richmond.....	5
Kamera Kranks	5
Nassau County Camera Club.....	5
Norfolk Photographic Club.....	5
Crockett Photographic Society.....	2
San Jose Camera Club.....	1

Small Clubs Advanced Class

The Camera Clique.....	18
Baltimore Camera Club.....	6
The Pack Rats.....	2
East Bay Camera Club.....	1
Washington Pictorialists	1

Club Notes

Forthcoming Exhibitions

London Salon of Photography. Address The Hon. Secretary, The London Salon of Photography, 5a, Pall Mall East, London, S.W. 1, England. Closing date September 1, 1937. Entry fee 5s. September 11 to October 9, 1937.

Twelfth Annual Exhibit of Photography by Texas Photographers. Address, Museum of Fine Arts of Houston, Houston, Texas. Closing date, September 25, 1937. All work entered must be the product of photographers resident in Texas and not before shown at the Museum. October 10 to October 31, 1937.

6th Minneapolis Salon. Address Ralph Burnet, 2601 Euclid Place, Minneapolis, Minn. Closing date November 5, 1937. Entry fee \$1.00. Limit 4 prints. December 1 to 31, 1937.

Victorian Salon of Photography. Address C. Stuart Tompkins, Hon. Secretary, The Junction. Camberwell, Melbourne, Australia. Closing date September 11, 1937. Entry fee 5s. Limit 4 prints. October 18 to 30, 1937.

International Photographic Exhibition, Centenary of Daguerre in Budapest, Hungary. Address Modern Hungarian Photographers, Rakoczi-ut 19, Budapest, Hungary. Closing date September 20, 1937. Entry fee \$1.00. Limit 4 prints. October 1937.

The Sixth Irish Salon of Photography. Address The Hon. Secretary, The Irish Salon of Photography, 18 Morehampton Road, Dublin, Ireland. Closing date September 25, 1937. Entry fee 4/6. Limit 6 prints. October 30 to November 6, 1937.

First International Salon of The Oval Table Society. Address Joseph M. Bing, Secretary, 10 West 33rd Street, New York, N. Y. Closing date November 1, 1937. November 15 to 30, 1937.

Fifth International Salon of Pictorial Photography. Address Fotoklub Zagreb, Masarykova 11, Zagreb, Yugoslavia. Closing date August 20, 1937. Entry fee \$1.00, limit four prints. October, 1937.

The Anthracite Salon, under the auspices of the Scranton Camera Club. Address Salon Director, Everhart Museum, Scranton, Pennsylvania. Closing date September 7, 1937. Entry fee \$1.00, limit four prints. September 18 to October 4, 1937.

The Fourth Canadian International Salon of Photographic Art. Address Exhibition Secretary, Canadian International Salon of Photographic Art, The National Gallery of Canada, Ottawa, Canada. Closing date September 10, 1937. No entry fee required. Prints may be sent unmounted. October 23 to November 15, 1937, and afterwards in other Canadian cities.

Eleventh Annual Open Exhibition of the Lincoln Camera Club. Address Hon. Exhibition Secretary, Miss E. Redfern, 8 Cecil Street, Lincoln, England. Closing date October 1, 1937. Entry fee 1s per print. October 29 to November 26, 1937.

First Rhode Island National Salon of Photography. Address J. Clement Grimes, Salon Chairman, The Camera Club of Rhode Island, 103 Westminster Street, Providence, R. I. Closing date November 1, 1937. Entry fee \$1.00, limit four prints. November 15 to 30, 1937.

P. Douglas Anderson's Classes

Enlarged to Meet Demand

Because of the increasing popularity of photography, both as a profession and a hobby, the University of California has announced that it will give more class courses in photography during the coming Fall term than it gave last year. Seven courses have been scheduled for San Francisco and Oakland.

The Extension Division has also announced that photography classes can be given outside of the Bay Region, within reasonable traveling distance of San Francisco, when an enrolment of 35 or more can be guaranteed.

P. Douglas Anderson, well known Bay Region photographer, and Fellow of the Royal Photographic Society of Great Britain, will conduct all the courses.

Classes now scheduled for San Francisco and Oakland are as follows:

San Francisco (540 Powell St.):

School Photography—Thurs., Sept. 16, 4-6 P.M.

Photography: Principles and Practice—Mon., Sept. 13, 7-9 P.M.

Miniature Cameras—Thurs., Sept. 16, 7-9 P.M.

Darkroom Technique—Tues., Sept. 14, 7-9 P.M.

Oakland (1730 Franklin St.):

School Photography—Wed., Sept. 15, 4-6 P.M.

Photography: Principles and Practice—Wed., Sept. 15, 7-9 P.M.

Miniature Cameras—Fri., Sept. 17, 7-9 P.M.

Those interested may attend the first meeting of any of these classes without charge, the Extension Division announced.

New York Club Sponsors Radio Program

Readers of Camera Craft are urged to do their part in the direction of the photographic hour on station WNYC each Friday at six o'clock. The Camera Club of New York has begun this thirteen week series with the intention of giving the amateur photographer as nearly what he wants as it can. Letters of suggestion or criticism or any questions about photography will be very helpful and most welcome.

The club is opening an annual series of lecture-demonstrations in the fundamentals of photography in September. Though intended primarily for the members of the club, the course will be open to a limited number of non-members for a small fee. A more advanced course will probably be given in the spring.

A number of one-man shows by some of amateur photography's best known workers have been arranged for monthly showing in the club gallery. Such a show by Bob Leavitt was on display during July. It will be followed by pictures by Dr. Michael Wishengrad in August.

Winners of Marvelous Marin Contest on Exhibition

The selected prints of the Marvelous Marin Photographic Contest will be on exhibition at The Emporium in San Francisco, 5th Floor, from August 2nd to 7th. On the night of August 5th, at 8:00 P.M., a special program of entertainment and lectures will be presented in conjunction with the exhibition. The Marvelous Marin Contest, which closes July 28th, offers prizes for the best photographs taken in Marin County. Entries in San Francisco can be delivered to the Lang Realty Co., 39 Sutter St., San Francisco, Calif.

1937-38 Print Interchange

Photographic Society of America

The clubs and individual members of the Photographic Society are urged to prepare their entries for the Print Interchange, immediately. Applications must be received before August 15th and all entries before August 30th. As applications must be filed prompt action is necessary.

Individual members are especially encouraged to submit prints and they may enter four prints in addition to those entered with their club groups, though, of course, no duplications can be accepted.

Act at once, and make your club the winner this year! Complete details and entry blanks may be had from Robert N. Bushman, Print Interchange Director, 13 State St., Schenectady, N. Y.

Attend Your Convention

Final plans for the Convention of the Photographic Society of America are now nearing completion. It will take place in Chicago, on October 9th and 10th, with meetings at the Blackstone Hotel and exhibits at the Art Institute.

A major feature of the convention will be its superb exhibits. Three shows, each of first importance, will be on view under one roof. There will be the 100 Print Salon of the P. S. A., a portion of the Scientific Exhibit and a Foreign Invitational Salon.

Eight papers will be presented, each by an outstanding person in the field of photography. At the present time complete details are not available but will be published in the near future.

The convention managers ask that members forward their reservations at once. For information on the convention write: J. E. O'Hagan, General Secretary of the Convention, 310 So. Michigan Ave., Chicago, Ill.

1000 Shilling Prize Contest

"Die Galerie" A Monthly Review of International Pictorial Photography, Vienna, VI., Linke Wienzeile 48/52 (Austria) cordially invites all photographers to participate at this new great Contest by contributing prints showing new and quite outstanding subjects. The best works received will be published in a new annual "Idea and Form."

This book should prove the fact that photography is still full of unknown pos-

sibilities. There still exist many new subjects unknown up to now to a great many photographers and there is the possibility of photographing old subjects in a new and interesting manner. The best prints will be awarded with numerous prizes amounting to the total amount of Austrian Shilling 1000—in cash (£40—resp. U.S.A. Dollar 200.), viz.

Last day for receiving prints: October 31, 1937. Prints, which must not exceed 4 in number, must be marked on package "Printed Matter, Photographs of No Commercial Value." All entries must be sent to the above address of "Die Galerie." If return postage is not remitted, it will be assumed that return of prints is not desired. Entry forms with all necessary details may be received free of charge from "Die Galerie" (Vienna), by request.

Hamilton Camera Club Election

On June 21st, the Hamilton Camera Club of Hamilton, Canada, held their annual election of officers. Selected for the coming year were: Arthur H. Lomax, President; A. M. Barrach, Vice-president; Victor E. Patterson, Secretary, and Grant C. Gates, Treasurer.

A Visitor From St. Louis

The genial Mr. S. S. Smith of the Camera Clique of St. Louis recently visited the offices of CAMERA CRAFT. Mr. Smith gave an interesting report of the fast growing Camera Clique, whose members have set the pace in the Small Clubs Advanced Class of the Monthly Competition. He also gave some sidelights on the Tulsa Camera Club, a young but vigorous organization, of which he is now an absentee member. An item of particular importance to clubs, was the forward-looking attitude of the Tulsa Club's founders, who besides leading the club through its growing-pains, had an eye on the future. They felt that a single group in constant control spells death or doldrums to a club, so they set a precedent of stepping out after their term in office and relinquishing control to a new group. Thus they built a solid base of experienced members that insured the club a long and active life. Too often good leaders hold the reins until they tire of the constant strain and, when they step out for good, no one of experience remains to carry on. To Mr. Smith, our thanks, and congratulations to

the Camera Clique, who have such men behind it.

Chicago Camera Club Elections

The Chicago Camera Club held an election of officers at their annual business meeting last May. The newly elected leaders, who will serve for a period of two years, are as follows—President, Will A. Kelly; Vice-president, Carl E. Brockhausen; Treasurer, William J. Becker, and Secretary, Raymond B. King.

Camera Group of Brooklyn

A new camera club, The Camera Group of Brooklyn, was organized in March 1937, and has now completely furnished a meeting room and two well equipped darkrooms. Meetings are held the first and third Tuesdays of each month at the Clubrooms, 1740 78th St., Brooklyn. Print competitions are held monthly, the subject for June being Flowers, and for July, Sports. A planned series of programs, consisting of lectures, demonstrations, studio and darkroom work, will be presented throughout the year. Any amateur interested in becoming a member is invited to attend one of the regular meetings or to communicate with the secretary, Herman Hack, 2045 Ocean Ave., Brooklyn.

California Camera Club Goes on the Air

On June 17th, the California Camera Club took over the program of the Camera Club of the Air, a feature every Thursday of Radio Station KSFO.

Dean Kinter arranged a very interesting program and C. Stanton Loeber, President of the California Camera Club, Meyer Levy, Jack Cannon, and A. C. Tomen, gave speeches explaining the activities of the club.

California Camera Club members were given the key to the studio and they made the most of their opportunities as the program continued.

Connell Speaks to Santa Monica Camera Club

Will Connell, whose prominence in photography is exceeded only by the importance of his work, gave a lecture and print criticism to the members of the Santa Monica Camera Club, June 16th. The members were unanimous in praise of Mr. Connell's remarks.

It is encouraging to us to note that such

men as Mr. Connell can and will find time to aid camera clubs in their search for stimulating programs for their members.

In the July issue of CAMERA CRAFT, Will Connell wrote of his satirical series on the motion picture industry, now published in the book "IN PICTURES," and if his writing is an indication of his abilities as a speaker, we envy the Santa Monica Club members on excellent evening.

Delaware County Camera Club

The Delaware County Camera Club, at their meeting on June 14th, elected the following officers: President, W. A. Gibson, Jr.; Vice-president, W. R. Boyd; Secretary, Walter G. Downward; Treasurer, R. L. Kerr; Directors, F. B. Gilliams, W. F. Tronpe, A. W. Cameron.

The Club holds meetings on the second and fourth Monday evenings of the month at their headquarters, 7168 Marshall Rd., Upper Darby, Pa., to which all those interested are invited.

Brett Weston Show At San Francisco Art Museum

At present on display at the San Francisco Art Museum, Van Ness and McAllister Sts., San Francisco, are a fine group of photographs and sculpture in wood, the work of Brett Weston, son of Edward Weston. It is most interesting to see how Mr. Weston's absorbing interest in the texture and form of natural things is so clearly expressed in both mediums. The exhibition closes on July 29th.

Notes and Comments

The Mortensen School of Photography

The facilities of the Mortensen School of Photography, in Laguna Beach, California, have been considerably increased and enlarged. Additional dark rooms have been installed to handle the work efficiently and to prevent over-crowding. A staff of assistant instructors have also been added to work with the students in carrying out Mr. Mortensen's instructions. The world's most beautiful models are another feature of the school. Complete details of the courses may be had by writing, The Mortensen School of Photography, Laguna Beach, Calif. Further details of the expansion of the Mortensen School of Photography will be supplied in an early issue.

Weddings

Peter Stackpole, staff cameraman for Time, Inc., was married to Miss Hebe Daum, muralist and sculptress of San Francisco, in Oakland, Calif., on July 17, 1937.

George Allen Young, Editor of Camera Craft, was married to Mrs. Helen Martin Quick, of Honolulu, in Oakland on June 19, 1937.

Fine Grain Parpan

To meet an increasing demand for a miniature camera film in which exception-

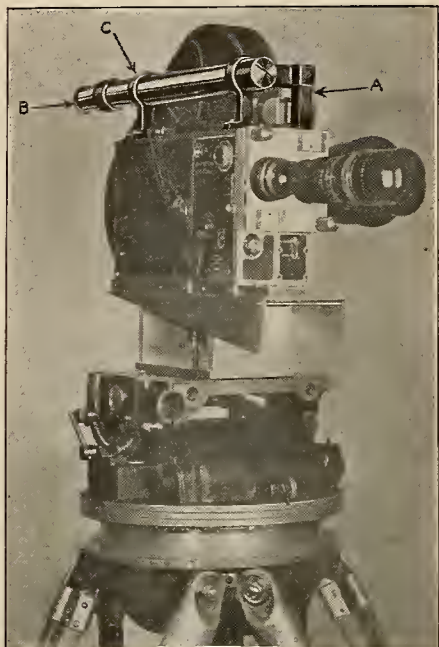
ally fine grain is desired at some sacrifice of speed, the Du Pont Film Mfg. Corp., is introducing Fine Grain PARPAN, a panchromatic negative film half the speed of Superior and with the finest grain obtainable for all around use. Greatest demand for PARPAN is expected during the summer months, when there is danger of over exposure with Du Pont Superior Pan from the intensive sunlight. Fine Grain PARPAN is available as follows: 36 exposure daylight loading cartridge for Argus, Leica, Retina and similar cameras, \$.85; 36 exposure daylight loading spool with paper leader for Contax and similar Zeiss Ikon cameras, \$.85; 27½ feet, notched and numbered (five 36 exposure darkroom loadings), \$1.80; 25 ft., 50 ft., and 100 ft. bulk film, \$.06 per foot.

In order to make Du Pont Roll Films more readily distinguishable, they will be sealed in the future with colored cellophane tapes: Green for Superior Pan, Blue for Fine Grain Parpan, Gold for Micropan, Dark Red for Infra-D. The same color scheme will be carried out on bulk film cans.

For further details, see your dealer or write, Du Pont Film Mfg. Corp., 35 West 45th St., New York, N. Y.

Reflex Focusing Device

Hugo Meyer & Co. have developed a special reflex focusing device for the Cine Kodak Special Camera. This new develop-



ment permits reflex focusing even when a 200 foot magazine is in use. As shown in the picture, the focus is viewed at the right and rear of the camera, with the greatest facility. The reflex focusing device may be obtained on special order only and further details may be had by writing Hugo Meyer & Co., 245 West 55th St., New York, N. Y.

Lenzal for Lenses

Lenzal is a lens cleaning preparation that contains no injurious materials. Working quickly and efficiently, it leaves the lens spotless and undamaged. The lens is the most important and costly part of any camera and its care and protection are safeguards for a long life for the camera and good pictures. Lenzal is inexpensive, costing about 1/5 of a cent per application, which is a small price to pay for the safety of your lens. For complete details write: George Lesnever, 213 Summer St., Lynn, Mass.

Correction

Due to a typographical error in the June issue the price of the Perplex Tank distributed by the Mimosa American Corporation, 485 Fifth Ave., New York, N. Y., was incorrectly given as \$3.50 instead of \$8.50.

Photographers' Association of America Convention

The Photographers' Association of America will hold their greatest convention in history, at the Stevens Hotel in Chicago, August 23rd to 27th, inclusive. The total number of exhibitors has now passed 79 in number and the exhibition space is nearing actual exhaustion even though increases in the space allotted have been made twice, since the original plans were laid. A very important addition to the convention program is a demonstration in child portraiture by Fred R. Bill, the author of that excellent volume, "A Manual of Home Portraiture." Complete details of convention plans and also entry blanks for the picture exhibit may be had on request from the Executive Manager, P. A. of A., 520 Caxton Bldg., Cleveland, Ohio.

Invents New Agitating Device.

The Central Camera Company, Chicago, Illinois, announces a new kind of agitator that enables photographers to keep the developing solution thoroughly agitated during the entire developing time. The Trojan Agitator does this job with no more effort than rocking in a rocking chair.

The Agitator is made of one piece stainless steel with a round rocker bottom and a grip-tight rubber top. Being of stainless steel it cannot rust nor corrode. Operation is as follows: Place tank on the agitator and with a slight motion of the hand, the tank will rock up and back in a circular motion, distributing the developing solution thoroughly over every part of the film. It works so effortlessly that you can continue work with one hand while the other agitates the tank when necessary.

The Trojan Agitator is available only from the Central Camera Company, 230 So. Wabash Avenue, Chicago, Ill., (or from Central Dealers) and is fully described in their New Bargain Book featuring amazing low prices on moving picture and still cameras, lenses, films, and supplies of all

kinds. This new Bargain Book will be mailed free upon request. Address your inquiry to Central Camera Co., 230 S. Wabash, Chicago, Ill. Please mention the name of this magazine.

Special New Agfa Film for Argus Camera

Announcement has been made that a new film spool prepared especially for the Argus miniature camera is now on the market. The new item, an 18-exposure film furnished on a special daylight-loading spool to fit the Argus Camera, uses the fast Agfa Superpan emulsion, well-known to miniature-camera users. Superpan has been selected by its makers from many types available as the most ideal material for photography with the Argus, because of the desired combination of high speed, full color sensitivity, and fine grain. The 18-exposure spool of Superpan film for the Argus, which sells for \$.50, is made by Agfa Ansco Corporation in Binghamton, N. Y., and is available at all photographic dealers.

The Fotoshop Issues New Bargain List

The Fotoshop, 136 West 32nd St., New York City, sends word that it has just issued a new bargain list of used stills and cine equipment which will be sent free to readers. Where a deal is contemplated the Fotoshop advises the photographer to make known his specific requirements stating (1) The make and model of camera desired, (2) whether he will purchase on a full cash basis, or (3) whether a used camera is to be offered as part of the consideration. Summer visitors to New York are invited to make the Fotoshop their headquarters for supplies as the store is ideally situated in the heart of the hotel and shopping district.

Eastman Announces "Kodak Seniors"

More new Kodaks with new features—Kodak Seniors—intended to meet the demand of picture takers who want fine equipment at moderate price, have just been announced by Eastman.

Now available are the Kodak Seniors Six-16 and Six-20 with either Kodak Bimat or Kodak Anastigmat f.6.3 lens. These two models replace the former Kodaks Six-16 and Six-20. Both are equipped with Kodex shutters having 1/25, 1/50 and 1/100 second shutter speeds, time and bulb actions.

Then there is the new Kodak Senior



Six-20 and Kodak Senior Six-16 equipped with the Kodak Anastigmat lens f.4.5 with Kodamatic shutter. Aside from differences in lens and shutter equipment, the general design and construction of Kodak Senior f.4.5 is the same as the Kodak Seniors referred to above.

In addition to the faster lens, the Kodak Senior f.4.5 has a top shutter speed of 1/200 second compared with 1/100 second on the other Senior models.

Chief new feature is the new shutter release located on the body of the camera. Because of this change in design, the waist level finder is no longer needed. Now picture takers, holding the Senior firmly in both hands and sighting through the new optical direct-view eye-level finder, can release the shutter with a touch of the finger. This new technique not only gets the picture from eye-level, but, in addition, minimizes camera movement and makes it easy to click the shutter at just the instant the scene is "right."

The Six-20 and Six-16 Seniors, with Bimat lens, retail at \$16 and \$17.50 respectively. The Six-20 and Six-16 f.6.3 Seniors are \$19.50 and \$22 respectively. The Kodak Seniors Six-20 and Six-16 with f.4.5 lens retail at \$29.50 and \$33.50.

Rolyn Mask and Arc-Lens Shades

New Lynn Features

A new, streamlined, U-shaped mask for Argus Enlargers and similar enlargers with the same size base, has been introduced to the miniature photographer on

the Pacific Coast by the Robert M. Lynn organization, 923 So. Grand Ave., Los Angeles.

Now, for the first time, it is possible to mask from all four sides with this new type apparatus. It features an exclusive, adjustable sliding bar arrangement that is most practical for all enlarging work. It handles enlargements up to 9" x 11" with a maximum border width of 1" at all times.

Known as the **Rolyn Mask**, this practical attachment is being displayed and demonstrated by leading dealers in the eleven western states. Beautifully finished in chrome metal, it is built to last a lifetime. There is nothing to get out of order and you can't bend or break it. Mask bars are always square and the enlargement paper is held flat and in proper position. Any amateur can assemble in three minutes ready for use.

A specially designed **Arc-Lens Shade** has been developed in England which is indispensable for photographing against the light. Similar to a tennis visor, this new type shade is instantly attached and grips firmly to the outside of the lens. These shades come in six sizes, from 1" to 2" and fit most popular cameras. They are being distributed in the United States exclusively by Robert M. Lynn establishment.

Consumers Union Reports

Perhaps the most common question voiced by the amateur photographer is a rather confused and plaintive, "What camera shall I buy?" In the long run each photographer must answer that question for himself by gradually collecting information about cameras until he is able to judge what best fits his needs. The Consumers Union of the United States, Inc., 55 Vandam St., New York, N. Y., now offer two reports in which the relative merits and values of cameras are carefully evaluated. The June issue of the organization's report deals with large cameras, while the July issue discusses miniature cameras. There is certain to be a great amount of the most useful and reliable kind of information in these carefully prepared reports. They may be obtained by becoming a member of the organization at a cost of three dollars. That amount covers a year's membership during which the member receives reports each month plus an annual

buying guide of considerable proportions. For full information write to the above address, and please mention Camera Craft when doing so.

Stolen Cameras

On Thursday, June 10th, the premises of the Photo Marketing Corporation, 10 West 33rd St., New York, N. Y., were entered and the following merchandise was stolen. Any information regarding this equipment should be sent immediately to the above address or the New York Police Dept.

	Camera #	Lens #
1 Exakta Camera B-8150-BR, Exaktar F/3.5	467889	738287
8 Exakta Cameras B-8150-PR, Primotar F/3.5	468309	751187
	677705	751180
	468307	751167
	467717	751192
	467703	751172
	467586	721475
	468300	751155
	467696	751177
1 Exakta Camera B-8150-Q, Zeiss Tessar F/3.5	467399	1831314
1 Exakta Camera B-8150-E, Zeiss Tessar F/2.8	468231	1849518
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The Miniature Camera In Hollywood

Rex Hardy, Jr.

FOR several months it was the writer's task to spend most of his time on the sound stages of the large Hollywood studios, making pictures of the actors and actresses as they worked. It was felt that pictures with more life than was displayed in the regular 8 by 10 inch studio stills would be more useful in telling the story of a particular motion picture for magazine purposes. To avoid use of the "frozen" stills supplied by the studios, recourse was had to photographing from the screen, without much success, and also to enlarging from the single frame negatives of the actual movie "take." In both cases the pictures lost definition and became exceedingly grainy in appearance with only a small degree of enlargement. Of course, when you view a motion picture, this grain is not apparent, for the obvious reason that you are not observing any one picture for more than a fraction of a second, and the variation in grain structure from frame to frame serves very well to hide the appearance of granularity. As a result of the failure of these two methods to produce the desired results, and the dissatisfaction with the production stills, we decided to have a try at the problem with the miniature camera.

Working through the publicity departments of the various studios, it was not difficult to gain access to the sets of the pictures under production, and the adapted procedure was extremely simple. For once, the problem of exposure practically solved itself. The solution to the question, "What



"From Warner Bros.' 'The Prince and the Pauper'."

Rex Hardy, Jr.

*Photographed for Life Magazine. Reproduced through
courtesy of Time, Inc.*

exposure?", was so simple I am almost ashamed to admit it. Knowing that the motion picture cameras used emulsions similar to those available for the miniature camera, I had merely to strike up a conversation with one of the cameramen, in the course of which I would ask him the setting of his lens aperture. I took advantage of a piece of general knowledge, and set the shutter speed of my camera at $1/50$ of a second, which corresponded approximately with that in use on most cinema cameras. Thus, with the aperture set at the opening indicated by the cameraman, and the $1/50$ setting, I was certain of a good negative. In practice, it was sometimes necessary to increase the shutter speed, and the aperture correspondingly, but the Contax, with the Sonnar F 1.5 lens was always able to cope with the existing problems. Only once in my experience, in the case of the Marx Brothers' wild antics, did the movement situation become serious. One day every negative I exposed was blurred. Naturally the movie cameras can grind away at $1/50$ of a second and forget the blur problem, but it is a different story in the case of miniature negatives to be enlarged.

The movie cameramen were usually very interested in the little Contax, and they, as well as directors, were very cooperative, allowing me to take up a position close to their own cameras. In most cases it was possible to shoot while the scene was actually being made. The sound man usually



"From Warner Bros.' 'The Prince and the Pauper'."

Rex Hardy, Jr.

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"From Warner Bros.' 'The Prince and the Pauper'."

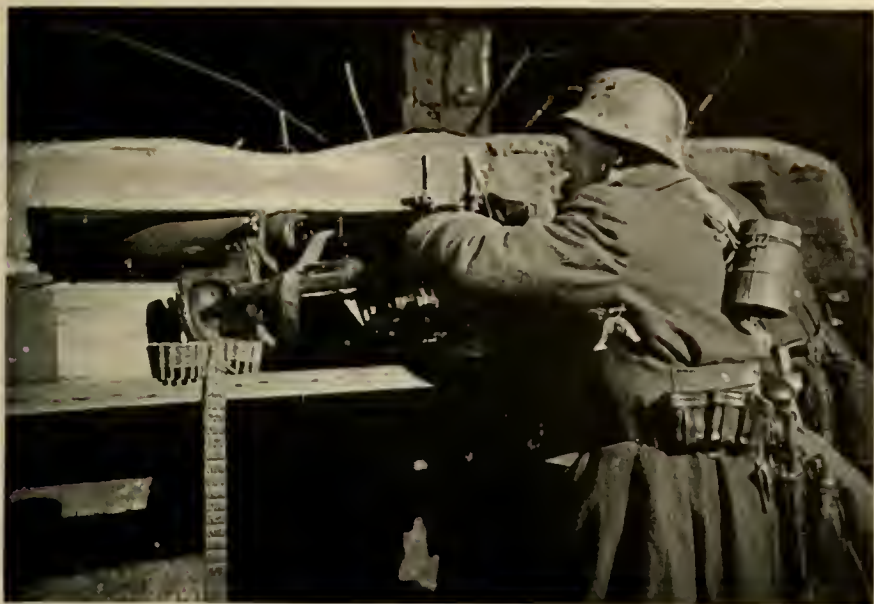
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told me that the click of the Contax shutter was not picked up, but for safety's sake, I tried to release it at times when there was no conversation. It could then, if picked up, be easily eliminated from the sound track. Negatives made in this manner were usually very pleasing in quality, because of the fine even lighting provided. There are never inky black shadows, unless they are needed for a particular mood, as illustrated in the accompanying illustration from the Twentieth Century-Fox production, "Seventh Heaven," and all lighting is well balanced and perfectly controlled.

As mentioned above, this work was done with the Contax II, with Sonnar 50 mm. F:1.5 lens, and the camera was loaded with DuPont Superior Panchromatic negative material, which proved highly satisfactory for both speed and color rendition. It gave both a long tonal scale and fine grain and, when developed in a Harry Champlin formula, could not have been improved on for the work under discussion.

With exposures of 1/50 of a second, the average aperture was F:2.5. One difficulty encountered occasionally was due to lights causing flare by striking the lens directly. The studio technicians usually place lights pretty close to the borders of their picture, and when their comparative focal length exceeded mine, and I was unable to go closer without getting in the picture,



"Andy Devine in Universal's 'The Road Back'."

Rex Hardy, Jr.

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I was temporarily halted. In these cases I could usually prevail upon the people involved to go through the necessary part of the scene for my benefit, and I would get closer to make the shot. Sometimes it was possible to shoot while the scene was being rehearsed, also. The illustration showing the little pauper with the priest, from Warner Brothers' "The Prince and the Pauper," was made in this way, from a point several feet in front of the motion picture camera.

As a result of the ability of the miniature camera in this type of work, alert publicity departments have been quick to put it to use. The same studio "still-man" who laughed at miniatures six months ago, is now trying to master the intricacies of the little cameras. Needless to mention, the animation apparent in studio pictures is increasing, as technique improves.

The writer has found his Contax to be an ideal camera for the type of photo-reporting necessary in Hollywood. It lacks the clumsiness of the more generally used 4 by 5 inch camera, and thus possesses considerably more versatility. During the past six months my Contax has gone with me on airplane and blimp flights, high up on scaffoldings above stages, into dressing rooms and homes and tailor shops, to race tracks, tennis courts, portrait studios and parties, and has done its job equally well under many different sets of conditions. The one handicap has been its disability to



*"Simone Simon in 'Seventh Heaven,'
20th Century Fox Production."*

Rex Hardy, Jr.

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handle flash work, but after considerable experimentation, even that has been worked out to satisfaction. A Kalart Speed Flash was fitted with an extra sprong spring, to overcome the shutter tension, and I am now able to get synchronization at any speed. While I try, if possible, to make my pictures without flashes, it has been found the only practicable method of working under certain conditions, for example: radio broadcasting. During rehearsals, and other events of similar nature, photofloods in reflectors have come in handy.

It seems to be true that anyone, even a person as used to cameras as a screen actor, is able to appear more natural when faced by a miniature than when being photographed with larger cameras. This is even true in flash work, and again, of course, the Contax, with the small Kalart "gun" attached, is much more inconspicuous than a 4 by 5.

The miniature camera was used between November and May, by the writer, to cover all assignments in and around Hollywood, and has more than earned its cost by the added consideration it has gained for the photographer, even if it had not served its other purposes to perfection. It is the best possible equipment for all around use in the type of work outlined.



*"James Stewart in 20th Century Fox
Production 'Seventh Heaven'."*

Rex Hardy, Jr.

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Fashions Aid The Amateur

Glen Fishback

HOW many of us go skimming through life without ever taking the time to get the most out of things? It might seem strange to suggest there are treasures hidden in the magazines on the library shelves, but who are we to question unless we have searched.

We might test the extent of our observations by asking ourselves a few questions concerning the illustrators in some of the better magazines. Can we as individuals state in precise manner what particular style characterizes the work of such photographers as Horst, Munkacsi, Nelson, or Steichen? It would be practical to go even farther and ask ourselves if we could recognize a representative picture of any of these workers if it were presented to us unsigned. No one would be expected to classify every picture in such a test, but the idea itself is practical, and until we can have a feeling of familiarity with an artist's work we have not begun to profit from that person's efforts.

Possibly by now we are beginning to realize some of the things that we have overlooked in our periodical perusals of the different magazines. If we only realized the fact, we have an opportunity to study under some of the best photographers in the country and at the expense of some other party. However, although most of the work has already been done by the time the picture is on the printed page, the sad fact still remains that we will profit from this opportunity only in proportion to the amount of effort we are willing to expend.

The methods of approach to such a situation are as multiple as the number of persons involved, but there are some items that we can note as possible suggestions. It is natural for a picture to fall under some such classification as portrait, action, genre, or candid. So if we are supplied with a list of this nature before we start, we will be able to separate our pictures into homogeneous groups. By keeping a separate list for each photographer studied we can form definite conclusions regarding the type of work each does.



Figure 1

Glen Fishback

We will not have to examine many pictures before we are aware of the fact that different individuals tend to specialize in different fields. Take the productions of Hoyningen-Huene as an example. After examining certain magazines in which his work appears, one is impressed with the fact that he concentrates on full length portraits of beautiful women dressed in the finest clothes. We might add that his illustrations are characterized by unusual effects produced by special lighting, careful attention to artistic arrangement, and frequent resort to elaborate backgrounds.

Having classified our pictures we are ready to go a step farther and make a more complete analysis of each separate shot. The comments accompanying the entries in the monthly print competitions (in this magazine) serve as a good example of what we might strive for in our own analysis. We might observe that whereas the monthly competitions offer a fine training course in print criticism, we can very easily overlook one of the most valuable features of this service.

By studying the pictures and comments each month we will note a gradual increase in our ability to understand a picture. However, how many of us have taken the time to write our own views on the picture before we read those of the editor? Herein lies the secret of a more rapid growth in our personal development. We can read the printed criticisms without exciting any great amount of creative brain activity, but the moment we are forced to put down specific statements we are very apt to find that we have been indulging in no end of fuzzy thinking.

With our ideas written down we are free to check with the printed remarks and not only find out the strong and weak points of the picture but also our personal rating as an observer. Several sessions of this type would undoubtedly do more to open our eyes to the many factors that go into making a picture than would months of passive reading.

Fortified with a reasonable amount of this practice we should have no difficulty in applying the same procedure to the leading fashion illustrations. We should also have progressed to the point where we take notice of some of the more subtle items of the picture. The fact that a model usually walks with her toes pointed ahead on a straight line, and that the charm of the model is subordinated to the glorification of the article being advertised are two observations indicative of such progress. Our interest in the work of individual artists grows with our study and it is but a short time before we feel almost on terms of personal acquaintanceship with the several subjects of investigation.

Jean Moral is a good man to study if we are interested in a modern treatment of models in action. The following summary of a survey of his work gives some idea of what to expect when studying his style. Out of ninety-nine pictures checked, sixty-eight were definitely action pictures, and several of the remaining thirty-one shots suggested activity of some sort. But the most surprising revelation was the discovery that every one of the pictures was taken from some sort of an angle. The majority were looking up from the ground with the model's position ranging all the way from walking directly at the camera to a quartering rear shot walking away from the camera. Quite a contrast to the good old teachings that one's



Figure 2

Glen Fishback

camera had to be held with its back in a vertical plane, and that the eye level was the proper view-point. However, the pictures not only demand attention but are interesting and hold together well. After all, what more could one ask when desiring to attract public attention to new creations of wearing apparel?

Since power of observation responds just as readily to exercise as do the biceps we should soon notice that we have acquired a broader conception of things pictorial. We have reached the point where we can express a definite opinion regarding a picture instead of resorting to the rather indefinite response of merely liking or disliking the shot. Better than this, it is very likely that we are beginning to appreciate a wider scope of subject-matter. Our study should have opened our eyes to the extent that we are more capable of recognizing merit when it is presented to us. Besides the technical advantages of our observations it can be seen that we have built toward a happier existence in broadening our possibilities of enjoyment.

The ultimate application of our pastime is not in the recognition of the value of the other man's picture, but in putting our knowledge into the production of our own prints. Only to the extent that it affects our own standard of work has it really affected us. Unless we realize this fact we have missed the main point in this discourse.

Remarks on the illustrations:

All three pictures were made with a 9x12 cm. Voigtlander, with an F:4.5 Skopar lens. Figures 1 and 2 were taken at 1/200 second and F:5.6-8. Figure 3 was taken at 1/50 second at F:11. Eastman SS Pan film-pack was tank developed for 21 minutes in DK-76 (75 grains KBr per gallon) at 65°. Prints are on normal Velour Black developed in the recommended Defender formula using 60 grains KBr. Full 3½ minute development was given. When shooting in close at 1/200 second even with the model in a slow walk it is necessary to choose the proper instant for exposure to avoid blurring of hands and feet. The advantage of working close is seen in the lack of sharpness of the surrounding objects thus aiding the model to be the center of interest. If absolute freezing of motion is required it is necessary to work at a faster shutter speed.

Figure 1 is a combination of low camera position, tilting of the negative during enlarging to make for a more striking effect, and three definite dodging operations to help balance the picture. The granite was allowed a longer exposure as it is slightly blocked out in a straight print, and the same was done to the highlight on the left door. The hat and shadow over the eye were held back and the area immediately surrounding was suppressed even more. Trimming was governed by the fact that the model required at least a suggestion of a place to which her leading foot could go, and she also needed more space in front than in back of her so it would not appear that she was walking out of the picture. Any other features of the pictures were governed by individual taste, and an attempt not to stray too far from accepted principles of composition.



Figure 3

Glen Fishback

Doing More By Observing More

William S. Davis

IN ANY branch of pictorial work the statement holds good that one can express no more than what one has seen or felt. Granting this, it is logical to draw the inference that the more one observes and feels the deeper becomes the well of experience upon which to draw as the source of personal expression. Cultivating the habit of intelligent observation is therefore of the greatest importance to the aspirant in picture-making, and there is no better material upon which to commence practicing than that which is closest at hand. The reason is two-fold: First, that it is always available; second, that the pictorial possibilities of familiar material is too often overlooked and much of significance thereby missed.

In urging the beginner to observe more, we do not mean the gathering of factual statistics, such as the number of windows in the house next door, or how many signs can be seen on Main street. It is axiomatic that we see what we look for, which in turn is largely determined by our personal interests. Thus, the lumberman looks at a tree from the standpoint of how many feet of lumber it will make; the farmer studies the sky for signs of weather changes, and the carpenter finds in a house spots which need repairing. All this is quite proper, but such observation is not *seeing* in the pictorial sense.

Observing things from the pictorial standpoint becomes easier once the student grasps the idea of what constitutes an artistic picture. The inexperienced too often think of the latter as just a representation of objects or events, overlooking the fact that the effect produced upon the spectator is due not alone to the train of thought set in motion by the nature of the subject-matter itself but, as well, to the arrangement of the component shapes and tone areas forming an esthetically satisfying pattern. Once one begins to notice the countless interesting patterns formed not merely by the shapes and grouping of individual objects, but also by quite abstract shapes of a transient nature due to the play of light and shadow, a fresh vista of hitherto unrealized opportunities is opened to view.

Since attacking concrete problems affords the best means of strengthening one's powers of observation, as well as being more interesting than attempting to digest theories, we would advise the selection of one or more well defined and easily accessible subjects for intensive study over an extended period. The type of subject-matter taken under observation is mainly a matter of personal taste or availability. Where interest centers



"The Village Church"



"A Touch of Winter"

Wm. S. Davis

upon figure work, a single model will afford an opportunity for countless experiments in posing, lighting, draping, etc. A few simple objects can be grouped and lighted in many ways, and viewed from various angles, in forming a series of still-life compositions. The view from a single window presents different aspects, according to the time of day and evening or state of the atmosphere. An architectural theme, or a clump of trees, not only permits observation of the basic linear changes produced by viewing the material from various angles—near and far, high and low—but also the influence of lighting and cast-shadows from morn to eve, fog, stormy weather, seasonal changes in foliage, illumination by moonlight or artificial light, and in a Northern climate the effect of snow.

By way of suggesting the possibilities of such systematic observation as that just outlined, I am presenting selections from two series, one an architectural theme, the other consisting of landscape *motifs* featuring a single group of willows at the edge of a pond.

The subject of the architectural series is a country church of the type frequently found in the older settled villages throughout the Eastern portion of our country. The structure occupies a corner lot on the main street, and faces West. Our picture entitled "The Village Church" was made from a position diagonally across the street from the front of the edifice on a June day shortly after one o'clock. To obtain the arrangement of foliage and architectural lines desired from this angle I had to work at somewhat close range, so used a $7\frac{1}{2}$ inch lens on a 5 x 7 camera. A diffusing screen and Ingento A filter were used in combination over the lens, it being felt desirable to emphasize tone masses and the sunlight effect rather than clapboards and individual leaves in the thick foliage. The Cramer Inst. Iso. plate used received an exposure of 1 second.



"The Meeting House"



"A Study In White"

Wm. S. Davis

In "The Meeting House" the South side is shown in full summer sunshine, the effect of which is strongly accented by the dark masses of foliage on either side. Since lines of perspective, and the relationship in size of rendition of near and distant objects, is governed by the distance from which the subject is viewed, it is sometimes needful to occupy a more retired standpoint than usual to secure the effect desired, in which case one must either be content with a smaller image for subsequent enlargement or else employ a longer focal length. As circumstances in this instance dictated the selection of a relatively distant standpoint, I used a No. 8 pin-hole instead of a lens at a bellows draw of 13 inches from the Inst. Iso. 5 x 7 plate, and gave an exposure of 50 seconds near 1 P. M.

"A Study in White" was made from the same side as the one last mentioned, only further toward the left and somewhat nearer. But what a tonal transformation has been wrought by the presence of snow and the absence of foliage on the trees. This is an enlargement from a Kodak negative, made on a winter morning, exposure 1 second at F:22, with Kodak Color-Filter, on Autographic film.

"A Touch of Winter" presents the North side, which is naturally in shadow. The rectangular character of the architectural masses in combination with the free linear structure of the tree enhance the variety of the pictorial pattern, creating an effect quite different than any of the other renditions. This is a hand-camera shot made in early afternoon on a bright day, exposure 1/10 second at F:11, with Ingento A filter, on Ansco film.

Our landscape series shows the material in every case from the same general direction, but at different distances and elevations, in winter, spring and summer, respectively. The data follows:

"The Frozen Pond." Clear winter's day at 12:30 P. M. A pin-hole



"The Frozen Pond"



"In April"

Wm. S. Davis



"When Trees Are Bare"



"Willows by the Waterside" Wm. S. Davis

used instead of a lens at 8 inches from a 4 x 5 Crown plate, exposure 20 seconds.

"When Trees are Bare." A close-up from a low standpoint, portion of a stereographic negative, made in bright sunshine at 2 P. M. on a February day. Exposure $\frac{1}{2}$ second at F:16 on a moderately fast plate.

"In April." Standpoint similar to that chosen in making "The Frozen Pond," but in this instance a 10-inch symmetrical lens was employed on the same 4 x 5 view camera. Hazy light, 3:40 P. M., exposure $\frac{1}{2}$ second at F:22 on Cramer Inst. Iso. plate.

"Willows by the Waterside" shows the material from practically the same point of view as that in "When Trees are Bare," but on a June day at 5 P. M. The 13 inch front combination of an F:6.3 Ilex lens was used "wide open," and exposure of $\frac{1}{2}$ second given a $3\frac{1}{4}$ x $4\frac{1}{4}$ Isonon plate.

Concerning Champlin 15

Harry Champlin

SINCE the publication of the book, "Champlin on Fine Grain," life has been for me one continuous round of letter-writing and question-answering. The postman in our city of Beverly Hills has delivered almost 4,000 letters to me, and my little shop has been a port of call for visitors from all over the world. Some of these visitors are tourists with photography as a hobby; some are chemists; still others represent universities and manufacturing concerns—all interested in formula No. 15.

Naturally there have been many questions asked, questions impossible to foresee at the time the book was written. For this reason, it might be well to say a few things about formula No. 15 so that people who have not written or called in person will have these questions answered.

The keeping qualities and the amount of film which can be developed in any developer are matters of importance to most photographers. Formula No. 15 has been kept in solution for over one year without any deterioration whatsoever. The developing powers of this formula will permit 48 rolls of miniature 35 mm. film to be developed in each 4 liters (1 gal. approx.). This means that this developer will develop 12 rolls of film per liter (32 ozs. approx.). This figure has been ascertained in my own laboratory in the development of some thousands of rolls of 35 mm. film.

In order to allow a reasonable margin of safety the book recommends that only ten rolls of film be developed in each liter (32 ozs. approx.).

The increase in time necessary in order to maintain correct density was found to be 2 minutes additional for each 5 rolls of film developed in 4 liters of solution. This amounts to about 2 minutes for each roll of film developed in 20 ounces of solution. Sensitometric strips developed as the first and 48th roll of film in our pyrex developing tanks have shown the same reading and have proved that the life of the formula No. 15 is safely beyond 12 rolls per liter of developer.



Rod La Rocque

*Eastman Super X exposed at Weston 64, with A filter,
Developed in Champlin 15*

Some workers have used a time increase factor of $1\frac{1}{2}$ minutes per roll per 20 ounces of developer because of a preference for a slightly thinner, more delicate negative. This is a purely personal matter. The worker is urged to follow the times given in the book and to make changes only after making the test recommended in chapter three.

Another feature of interest to many people, who have mixed up and used the developer, was the heavy precipitate which formed shortly after film was developed in it. This precipitate is formed mainly of the anti-halo coating and gray-backing in 35 mm. films and is photographically inert so that it will have no effect whatsoever upon subsequent developing. Many people were alarmed by this heavy precipitate which sometimes took the form of large flakes and settled in the bottom of the developer. You may filter out this precipitate if you care to do so. We never filter it out in our own laboratory.

Another question which arose many times was one relating to the density of normally exposed negatives when developed in formula No. 15.

There seemed to be a general idea that normally exposed negatives could not be developed in formula No. 15 because this developer was only suited to less than normal exposures. The difference between a negative, such as Du Pont Superior, exposed at Weston 24 and at Weston 64 is simply a matter of density of the resulting negative, and the denser negative will require more printing time.

It has been proved many times that thin negatives with a wealth of detail are better for enlarging than dense negatives, and the user of formula No. 15 will soon learn that there is incorporated in the image of his negatives a dye which acts much the same as a dense deposit upon the negative. For this reason it is advisable to expose the negatives so that they will appear thinner than negatives developed in ordinary developer.

The denser negatives, however, will not have the blocked-up highlights, which are a feature of so many miniature negatives. Hence, formula No. 15 will develop normally exposed negatives as well as, or better than will any other fine grain formula known to this writer.

Another point which needs clarifying is the total volume of developer to be made up from the formula. In each instance, the amount of water given is the amount of water into which the chemicals are to be dissolved. There will be a total volume of approximately 15 per cent more than the volume of water given with each formula.

We have had reports from all over the world relative to the temperature best suited for development in formula No. 15. Seventy degrees Fahrenheit has proved to be correct.

There is a definite loss in film speed when the temperature is decreased to 67 degrees Fahrenheit. This loss in film speed is due to the fact that the temperature is not high enough and unless the temperature is at 70 degrees Fahrenheit, all the chemicals in the developer will not work at maximum efficiency; there will not be sufficient stain to the developed image.

Now, the image formed by formula No. 15 during the process of developing appears in full detail after a certain length of time in the solution and then, as development time is increased, contrast increases also. This is a little different from the usual development progress. Developers with a high reduction potential usually build up the highlights first and then, as the development time is increased, build up the weak shadows. Formula No. 15 builds up highlight and shadow alike and, as development time is increased, highlight density is increased. During this process there is a staining of the developed image and this stain has the same effect as a heavy deposit in the negative. Hence, it is possible to stop development at the point where there is sufficient contrast due to the stain itself, even though the reduction process is not as full as is the case with ordinary developers.

You can see from this that the staining of the image is highly important and if the temperature is not high enough to produce this stain, there will be a loss in the efficiency of the developer.

Photographing The Mouth

Alda Jourdan

NEXT to the eyes the mouth is without doubt the most expressive feature of the face. The muscles of the mouth are naturally ready tools for the thoughts, and are most natural and beautiful when allowed to function without strain. That is why the spontaneous poses in action or repose which may be recorded today are really the first truly descriptive pictures of that feature. When a person sits in composure for a few seconds, especially under the conditions of former portraiture, the mouth assumes a tense severity or else it relaxes into a wholly impersonal presentation.

All of the range of emotions pictured in expressions from the fullest glee to the deepest gloom are described by the mouth and so the better the feature is delineated the better the portrait. Proper delineation means that the color, shape and texture of the skin should be carefully and truly recorded. The lips are darker in tone than the face, and possess a rounded form, and the skin has a different texture than the other skin of the face. If the standard procedures of sound photographic technique are followed the resultant quality will assure the necessary delineation.

It is most important to learn to recognize when the mouth is in accord with the general expression and attitude of the pose. Segregating different features and parts of the body in a description of portraiture may seem contradictory to the uninitiated, as it separates the parts under observation seemingly to the detriment of the wholeness. Indeed, in recording natural attitudes, many times parts of the face or figure are obscured in favor of other parts for character emphasis; but the idea of a portrait of the particular model before the camera is always the guiding incentive and after practice the photographer learns to select the leading movement much as the musician his harmonies or the writer his themes. First there is the photographer's sensitiveness to the personality, or the dissociation of it from

others. Then a realization of the particular attitude, followed by a close scrutiny of the eyes, the mouth, and of other propitious parts of the form.

We used to worry about the size and form of the mouth, fearing any variation from the ideal norm. When I am removed from this consciousness I may have an eternity of punishment awaiting me for the, to me, very apparent sin of remodeling mouths. We are often requested to retouch out the corners, and to thin the lips to make them appear *smaller*. But as I look back now I realize that it was not as much the shape of the feature that was unsatisfactory, as the fact that it was unnaturally portrayed.

It most poses the upper lip is more in shadow than the lower and therefore darker in tone. Because more light falls on the lower lip it is often not properly outlined, the lower edge being obliterated thus making the lip appear fuller and deeper than it is. If this cannot be controlled it may be helped toward its natural dimension by retouching.

In many expressions the mouth is caught more or less open, which brings the teeth into prominence. In some poses the teeth catch too much light and attract more attention than their relative importance merits. They may be toned down on the negative or in the printing. Teeth which have been filled or otherwise blemished may be easily corrected by retouching, but of course it is better to catch a pose that does not need to be retouched.

The prevailing custom of painting the lips adds to the difficulty of photographing the mouth. Painting the lips changes their outline, destroys the skin texture and throws the harmony of natural tone out of balance. However since the mission of photography is to portray realistically, things as they are, the best thing to do is to try to record the appearance of the mouth when painted.

An Amateur Shoots Birds

Mary Rowell Smith

UNTIL two years ago I thought that I could not hope to get satisfactory bird pictures without a telephoto lens. That year a robin built her nest about eight feet from the ground in my honeysuckle bush, and I decided to experiment with the equipment that I had. My camera, an



Alda Jourdan



Fig. 1



Fig. 4

"Ensign-Special" Reflex, takes a $2\frac{1}{4}$ " x $3\frac{1}{4}$ " picture and the lens is an f.4.5 with a five inch focal length.

My only purchase was a six foot step-ladder to serve as a tripod. I placed this so that the top was less than three feet from the nest and facing west so that the sun would be at the back or side all the morning. As the ladder was too low to bring my camera on a level with the nest, I nailed a box to the top. I then strapped my camera firmly to the box with a small board placed under the rear so that it tipped forward slightly to look into the nest. Next I tied a strong string to the exposure lever holding it in place with a narrow strip of adhesive tape. To insure a downward rather than an outward pull, I brought the cord through a hook which was screwed just below it on the box. Finally, I tied back the branches that obscured my view, and focused on the nest. After testing it several times to make sure that the string pulled freely, I wound my camera and, taking the string in my hand, walked off twenty feet or more from the bush. Pretending to have lost all interest in the nest, I proceeded to dig in my garden while watching the mother bird out of the corner of my eye.

As was inevitable, she had flown away as soon as I started my preparations and was much distressed all the time I was working there. But when she was satisfied that I was through, she returned to her eggs. I pulled the string while she was still standing on the edge of her nest. As was to be expected, the click of my camera frightened her off again and I thought it best not to bother her any more at that time. I therefore took my camera away but left the ladder in position in order to avoid so much fussing about another time and also to accustom her to its presence.

The next day I tried a second exposure and this time she did not fly away. Whenever this happened I refrained from going near until I knew she was away from home. She soon became quite accustomed to the queer looking paraphernalia that stood so near and often remained on her eggs when a picture was taken.

In spite of the way the robin accommodated herself to my intrusion,



Fig. 2



Fig. 3

my first pictures were disappointing. Quite a little experimentation was necessary before I got the correct exposure and a sharp focus. You see I could not tell the exact spot upon which my subject would light and at so close a range, this was an important factor. Eventually I used super speed films which permitted more stopping down and consequently obtained much better definition.

After the young ones hatched I was able to get a number of interesting photographs of them as well as of their mother. Illustration No. 1 shows her with food in her beak about to feed them. It was taken when they were only a day old and were still too weak to hold their heads up except for wobbly seconds. Note the odd pattern on her back caused by shadows from the leaves.

Last year the robins built elsewhere and a pair of unsuspecting catbirds moved into my honeysuckle bush. I obtained a similar series of pictures of Mrs. Catbird and family and in addition had the good fortune to get several photographs of the mother away from her nest. It happened this way. I had noticed that when she was disturbed, she frequently flew to a particular post in my garden. It was quite close to her bush and afforded her an excellent vantage point from which to keep an eye on me as well as on her nest. I therefore strapped my camera to a box filled with stones and pegged securely to the ground in front of the post. This time I focused on the top of the post and then walked over to the bush with the string in my hand and deliberately frightened her from the nest. She flitted about for a while but finally lighted according to schedule and picture No. 2 was the result.



Fig. 5



Fig. 6

A second bird which I photographed last year illustrates the possibility of other methods for close-ups. A small woodpecker had made her hole in a grape arbor post near a friend's back door. Being less timid than many birds, she came and went with people about. I therefore took my position on a box about seven feet from the hole and waited for her to come home. When she did appear, however, she disappeared so quickly into the hole that I had no time for a snap. My friend suggested knocking on the post, and sure enough she bobbed up to inquire what the disturbance was. I snapped her in the doorway. Illustration No. 3.

Of the birds which I have photographed up to date, I think the most difficult to get was the thrush. Thrushes are too shy to build near the house, and unless you search very carefully for their nests, you are not likely to see one. I was therefore especially pleased when I finally located one in a nearby patch of woods, and was still more gratified to note how low it was built. It was in a white birch tree not more than three feet from the ground. Originally there were three eggs but one disappeared, though I never knew how, and of the remaining two only one hatched. Picture No. 4 shows the one baby thrush crouching in his nest at his mother's warning cry. She was extremely nervous but hovered near because of her concern over her baby. I did not set up my camera with a string pull but got several snaps with the camera in my hand, and while they are not as close as those taken at the nest, they are worth enlarging.

Sparrows are such a familiar sight around the house that few people would suspect what care is required in order to get their picture. They not only take fright very easily but they are very quick in their movements. For this reason I found it necessary to keep out of sight in the garage while waiting to photograph them and then to use a speed of not less than $1/200$ of a second. A dish of food in the yard lured them before my camera which was placed on an ordinary tripod closed up as short as it would go and stuck into the ground. By using a garden fork also stuck into the ground, through which to guide the string, I kept the pull downward as usual and was pleased to find that the camera did not upset. Illustration No. 5.

This year illness in my family has necessitated a somewhat different



Fig. 7



Fig. 8

method of inducing birds to pose for me. The problem was to bring them to the house so that I would not have to go out. To accomplish this I have contrived a lure just outside an upstairs window. It consists of a ledge nailed at right angles to the house and containing food and water. Suet has proved to be the great attraction and is visited many times a day by robins and orioles, and occasionally by a catbird or a bluejay.

A box nailed to the window sill serves as a camera rest and is only about three feet from the feeding ledge. Pictures taken here have been most successful as there is sun all the morning and an unobstructed view. Picture No. 6 is a robin taken in this manner and No. 7 is an oriole.

As the click of the shutter usually frightens them away, I have tried a few shots through the closed window. No. 8 is an example of this expedient. While it is not as sharp as those taken outside, this method has such decided advantages over outside pictures that I believe it worth further trial. In the first place I can operate my camera directly instead of using a string. This makes it possible for me to pull the tabs and wind for further pictures as long as the bird remains. And in the second place her stays are much longer. The example given was taken under the added handicap of no sun. This factor should be eliminated before we have a really fair sample of what can be done with an intervening window.*

In conclusion it is perhaps unnecessary to warn my readers that bird photography takes much time and patience. All camera enthusiasts know that no picture can be taken hurriedly, but with wild life this is particularly true. Birds and animals cannot be hurried without frightening them away altogether. But the very difficulties of such photography seem to lend patience as well as zest for this fascinating sport.

* If the window is clean and free of flaws or reflections it will not interfere in any important degree.—Ed.

Cinema Section

Edited by

William A. Palmer

Type For Titles

HOW can I make good titles for my films? This is the question most asked by the movie maker once he has mastered the elements of picture shooting and wants to expand his technique toward the advanced class. Even those who have been working with movies for a number of years and have tried to make their own titles are still looking for ideas and methods by which they can do the job more successfully with less effort.

The problems in title making are two fold. First there are the difficulties of preparing the title cards with neat legible lettering and second there is the problem of setting up the camera so that it is centered and focused at the close distance to include the card. There are a number of methods of preparing the title cards, the most common ones being typewriting and hand lettering. There are also various types of moveable letter outfits using metal, wood, or celluloid letters which can be arranged on a background to spell out the desired words.

All of these common methods of setting up the title lettering, however, have some objection. The typewritten cards do not look very well because they are so easily identified as coming from a typewriter with each letter given the same amount of spacing regardless of the width of the letter. Hand lettering is ideal if one has the proper ability to handle a lettering pen with professional skill. There are various lettering guides which can be purchased which will give very good looking lettering, but the style of lettering is limited to a simple gothic shape. Hand lettering with or without a guide is also a rather slow process since it is necessary to space the words carefully in order to make a neat appearance. The moveable letter outfits are also very slow since the letters must be laid out and then spaced properly. The matter of keeping the letters on a straight line is often quite a painstaking job.

Of all the methods of preparing the title lettering, by far the best from the appearance standpoint is the use of regular printing from type in a printing press. For this reason many amateurs have purchased small card presses and a couple of fonts of type so that they may set up their titles and print them with the finest professional appearance. The ability to have any style of lettering with perfect

regularity and spacing of letters is very desirable, but here again there are difficulties. It is quite a laborious procedure to set up the type for a title, lock it in the chase or form, place it in the press, ink the rollers and get a satisfactory impression. It is usually necessary to print several cards before the inking or the impression is even enough to cover all the letters. After a satisfactory printing is accomplished, the type must be cleaned off and re-distributed back in the type box. Another difficulty is that it is very hard to print a card with white letters on a black background so that the card can be photographed on regular reversible film. White ink is not satisfactory and while reasonably good results can be obtained from the use of aluminum ink, it is at best a messy proposition.

One of the nicest things about setting regular type though, is the way all the letters in the line are just lined up and pushed together with each letter automatically spaced just right. Since each individual piece of type is a neat little rectangle and just the same height as all the others in the font, it is very easy to space and line up the words. The accurate spacing out between letters that printers use to "justify" a line and make it just the same width as all the others in a paragraph, is not necessary since the movie title looks very well if the two or three lines are a little unequal in length, but are centered so as to make a symmetrical composition. If the messy part of inking the press and making a good impression is eliminated, type is the ideal title medium.

The following plan is one whereby a font of type can be used for title lettering about in the way that the regular moveable letter outfits are used. It has the advantage, however, of giving the choice of an unlimited number of type styles, or as many as one can afford, and much greater ease of setting up the letters since spacing is automatic. It is necessary to build a special title stand in order to use the system, but this is in reality a great advantage, since once the special stand is built and the camera adjusted so that the proper field is found, there need be no more off center titles. The system eliminates most of the drudgery of title making and is particularly convenient when only a few titles are needed now and again.

Photographing the Type Directly

The nucleus of the idea is to prepare a font of type in such a way that the type itself, after being set up, can be placed in the title stand and photographed directly instead of having to be printed to make a title card. In other words, by photographing the type instead of the image made by the impression of the type in printer's ink, all the operations of inking a printing press, getting a good impression, and cleaning up the ink are eliminated. In fact there is no need for a printing press at all nor a chase (the rectangular iron frame which holds the type in the printing press) nor furniture (the term used by printers for the little blocks of wood which are used to fill out the chase when little type is used).

A font of type is purchased from a type foundry (24 to 30 point size is the most suitable) and prepared in the following manner. All of the letters are given a coating of dead black paint either by dipping the pieces in the paint or by setting all the characters face up and spraying them. It is well also to get a font of spaces and paint them too. The faces of the type pieces as well as the sides should be given a thorough coating and when the paint is dry, all the pieces in the font should be lined up together in a rectangular block, faces up, and tied together with a string. Then the surfaces of the letters are given a coating of aluminum paint or better yet aluminum powder applied as follows: the very face

of the type is given a thin coating of shellac or varnish. This must be carefully applied so that just the top of the letters are coated and no shellac gets down in the depressions. The best way to do this is to use a regular printer's proof roller which is made of soft rubbery material. Place a small pool of shellac in the middle of a sheet of clean glass about a foot square and roll it out with the roller until the surface of the roller and the glass are both evenly coated. Then work the roller over the type as if inking it. Allow the shellac or varnish to dry a little until it becomes very sticky and then dust on a good layer of dry aluminum powder. The powder can be applied easily by placing it in a little bag of fairly loose mesh cloth and shaking the bag as it is held a few inches above the type. When the shellac or varnish has dried completely, dust the type off with a dry paint brush to get rid of the extra aluminum powder and the type is ready for use, having a dead black coating except for the forms of the letters which will be bright aluminum.

For storing and separating the type one should buy a regular type case and keep the type in the compartments that regular printers use. These are not in alphabetical order except for the capital letters but are placed in such a way that the letters used most often are in the most convenient places. The arrangement seems a little peculiar at first but after one gets used to it, he will be able to set up the titles a great deal faster than if the letters are kept in alphabetical order. The type cases are not marked, since regular printers know the arrangement so thoroughly, so it would be well when buying the case, to ask the dealer to mark which letters should go in which compartment.

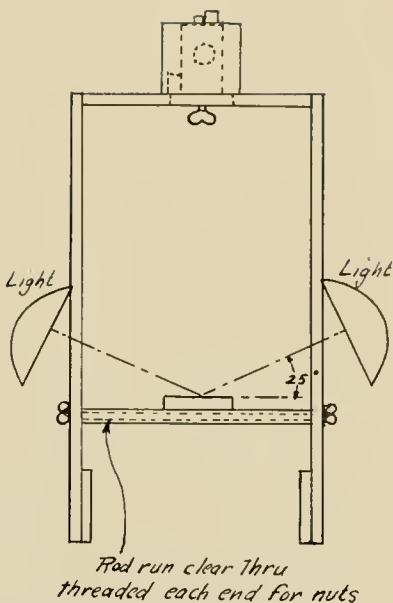
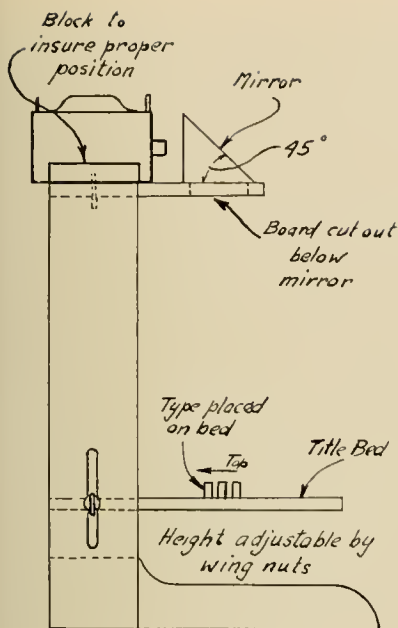
Having prepared the type by painting it as described above, it is a simple matter to set up the various words of a title on a black background, using a straight edge to keep the line straight. The best background, which forms the bed of the title stand to be described, is a piece of black velvet glued to a piece of board. The velvet must be thin with a short pile so that the type pieces will set evenly.

Of course all the letters, and thus the titles set up by their use, are reversed from left to right as one looks at the type. In other words the title is the mirror image of what it should be when projected on the screen. So in setting the word up, the letters must be placed in a line starting at the right and running to the left. Top and bottom of the various letters can be easily distinguished since the bottom of each type piece has a little nick in it. When a line of letters are set up to form words there must be a continuous line of nicks along the bottom side and any inverted letter can be noticed at once.

Shooting the Reversed Title

Since the title lettering, as set up in the specially painted type, is reversed from left to right, it is necessary to photograph it in such a way that it is turned back in the right way. This is accomplished simply by photographing the type through a mirror instead of focusing the camera on the title directly.

The title stand illustrated here incorporates the mirror to turn the type around and furnishes a horizontal bed on which the type can be placed. The camera is mounted at the top with the lens pointing out in a horizontal direction but the mirror turns the view downward to include the type. The mirror should be a good grade of thin plate glass, preferably silvered on the surface. The silver surfaced mirrors are more expensive and harder to obtain, but can be purchased from manufacturers of lantern slide projectors. A regular back sur-



Title Stand

faced mirror if a good grade and on thin glass is satisfactory, for usually the slight double image is not noticed. The mirror is mounted at a 45 degree angle permanently so that it will not be moved accidentally. The camera is mounted with a block placed along the side so that it may be removed and replaced, each time occupying the same position. The distance between the top board which supports the camera and the title bed depends upon the size of type used. Ordinarily with 24 or 30 point type, it is satisfactory to have the camera include a width of seven to ten inches. To do this the distance from the lens of the camera to the mirror *plus* the distance from the mirror to the type on the title bed should be about 18 to 21 inches. The bed for the type can be made adjustable as to height so that the field included by the camera can be just right.

The alignment of the camera on the stand and determination of the exact field on the title bed had best be done by trial. The finder, of course, is useless at close distances so the camera is fixed in position with the lens on the center line of the stand. The mirror supposedly has been fixed at a 45 degree angle and the bed placed at the proper distance. The lens should be focused by the focusing scale and careful measurement made of the total distance from camera to mirror plus the distance from mirror to title bed. Visual focusing devices can be used if the mirror is made large enough. A piece of cross section paper is then put in the position that the type will occupy. (Type is approximately three quarters of an inch high so the paper should be placed that height above the title bed.) The cross section paper should be fixed in position so that it will not be shifted accidentally and every other line, both horizontal and vertical, should be

numbered along lines which will cross somewhere near the center of the field. The lights should then be set up as shown in the illustration and a strip of film run in the camera. This need be only a foot or two of positive film which can be developed in an ordinary photographic tray. From this piece of film the exact outline of the camera field can be marked on the cross section paper and a finishing nail driven into the title bed at each of the four corners just outside of the field. These nails then will mark the limits of the photographed area and if four rubber bands are placed between the nails, they will form a fence in which the type can be placed and centered easily.

The angle at which the ordinary photoflood reflector units are placed is important in order to get the best picture of the type. The illustration shows this angle which will cause the letter outlines to stand out brilliantly and make the background so dark that it will not record at all.

Backgrounds can be introduced with this method of title shooting either by double exposure or by laying a card with the proper background on the title bed before placing the type in position. With this latter method, however, it is necessary to provide a black "box" on the background on which the type is placed. This is merely an area large enough to include the title lettering which is made entirely black so that the rectangular type shapes do not show up against a lighter background.

In photographing the type, reversal film must be used. Agfa or Gevaert film, which is not compensated for exposure in the processing, can be used without any caution. If Eastman film is used, the laboratory should be cautioned that the film is title material and that it should be given "Single Beam Printing."

Questions and Answers

Question: Can 16mm. film be reduced to 8mm.?

Answer: Yes, there are several laboratories which specialize in this type of printing. Not only can the 16mm. film be reduced to 8mm. size, but 8mm. can be enlarged to 16mm. This latter, of course, does not give such good results since the detail of the 8mm. original is limited. Two firms doing this type of work are: George W. Colburn, 1197 Merchandise Mart, Chicago, and Superior Safety Film Company, 98 Academy St., Newark, N. J.

Question: Can wide angle lenses be obtained for 8mm. cameras?

Answer: No, no manufacturer makes such a lens and it is doubtful whether the mechanism of the ordinary 8mm. cameras would permit a lens with a focal length much shorter than that ordinarily supplied.

Question: How are the "f" markings on a lens derived?

Answer: The numbers of the lens apertures in the "f" system are obtained by the simple arithmetic of dividing the diameter of the lens opening into the distance between the center of the lens and the film (when the lens is set at infinity). This distance is known as the focal length. Thus if the lens opening is $\frac{1}{2}$ inch in diameter and the focal length of the lens is 1 inch the "f" number of the lens would be 1 divided by $\frac{1}{2}$ or f 2.



"Wintersonne"

Lojse Erjavec
Ljubljana, Yugoslavia

Advanced Medal Print

A rather amazing thing occurred in this month's judging. The Fotoklub Ljubljana, Yugoslavia, made a clean sweep of the Advanced Class, winning all five awards in that division. This is the first time that that has happened in these competitions, so the Fotoklub Ljubljana may well be proud of their achievement. It begins to look as if we may have one of those exciting "photo finishes" between the Fotoklub Ljubljana and the Fort Dearborn Camera Club, with the possibility that the Los Angeles Camera Club might fool everybody by staging a strong finish. First honors in the Large Clubs Amateur Class are still wide open to any energetic group that decides to go after them. Only three more judgments remain. Let all clubs look to their laurels.

It is interesting to examine this group of five prints for tendencies which are common to all of them. It is plain that these photographers are interested in recording the romantic and emotional qualities which they find in the scenes and people of their country. They use the medium in fairly "straight" fashion, that is they seldom resort to hand work of any kind or to control processes such as bromoil or the paper negative. About the only departure from a literal rendering is the introduction of diffusion. They use that device coupled with lighting effects to enhance the romantic and emotional qualities of their subjects. In fact a preoccupation with outdoor lighting effects is perhaps the most noticeable characteristic of this work. Observe that all of the outdoor shots in this group are photographed against the light.

The present print is a splendid example of how the subdued light of a foggy day simplifies a landscape by obliterating detail, and permits the photographer to make a picture in which subject matter is subordinated to mood. At first glance some may feel that the composition is weak because the only strong leading line and the only bright highlights are all at the left. Study of the picture however should make it clear that the base at the right and the tree at left-center effectively balance the elements on the left, so that a rather striking and thoroughly sound composition is obtained.

Data: 3 x 4 cm. Zeiss Ikonta camera; 1/25th sec. at F:5.6, on E. K. Panatomic, in A.Q. Borax; 11½ x 13½" print on Agfa Studio. Prints may be obtained at the price of \$5.00 upon application to Camera Craft.



"Ernte"
Peter Kocjancic
Ljubljana, Jugoslavia

■ Here again we see the effective use of back lighting and very limited amount of diffusion to enhance the romantic qualities of a scene. Observe that the back lighting subordinate unnecessary detail in the foreground and makes it possible for the photographer to carefully place his highlight accents by adjustment of the figures in relation to the light. Diffusion is a dangerous thing in the hands of the beginning photographer because it is so easily overdone. We think that one of the secrets of proper diffusion is to use it only when the picture is made under definitely soft light. That is on a cloudy or hazy day. Never carry diffusion to the point where the feeling of solidity in the forms is lost. That is the way that this group of photographers use diffusion and few will deny that they obtain some very pleasing results.

Data: 4 x 4 cm. Rolleiflex; 1/50th sec. at F:4.5, on E. K. Panatomic in M.Q. Boro light yellow filter; diffused through DuPont No. 1 diffusion screen. Print size 11½x11½

Third Award Advanced Class

■ It is indeed rather astonishing to see what an extremely effective picture can be made with such limited subject matter. A few spots of light on the water, a few rocks in the foreground and a suggestion of the distant shore, is all we see here. But the emotional quality, the mood is strongly revealed and that is the important factor in all romantic landscape. Observe that even the strongest highlight in the immediate foreground carries a definite tone in its brightest part. So many pictures of sunlit water are spoiled by blocked up highlights. The shadow detail is also maintained. This desirable condition is much easier to obtain when the picture is made under subdued light as is the case here, for then the scale of the subject is greatly reduced. We could wish the darker tones of the distant shore carried into the left upper corner as they do at the right. The left corner is slightly weak as things are. It should be possible to make this adjustment by local dodging.

Data: Film size 3 x 4 cm.; 1/25th sec. at F:56 on Perutz film; bromide print 11½x14½".



"Solne Zmagaja"
Pfeifer Martij
Ljubljana, Jugoslavia

**Fourth Award
Advanced Class**

■ This is the only picture in the group which was made by artificial light but here as well the interest of these photographers in the effect of light is clearly evident. Mr. Kocjancic has used his light very skillfully to weld these three figures into an effective composition. The picture is more telling with the two subordinate figures than it would be with the violinist alone. They add story telling power to the picture; that is they supply a more elaborate theme, and also fill what might otherwise easily be an awkward blank area in the picture space. In the original print the features of the subordinate figures are just barely visible. We fear that they may appear rather devoid of detail in the reproduction. It is possible that the picture might be slightly improved if these two figures were shown just a tone or two brighter. They would still be sufficiently subservient to the principal object.

Data: 10 x 15 cm. Studio camera; 300 watts artificial light; 3 seconds exposure on Mimosa plate. Print size 11 x 12".



"Trio"

Oskar Kocjancic
Ljubljana, Jugoslavia



"Turjak"
Ante Kornic
Ljubljana, Jugoslavia

**Fifth Award
Advanced Class**

■ Mr. Kornic offers a very interesting village scene which would probably have placed considerably higher in the rating if it had not been for the distracting quality of the bright roof which cuts the left edge of the print. This bright spot weakens an otherwise good composition because it pulls the eye over to the left edge of the print when it should travel along the road. Bright spots such as this are always much more powerful when they appear at the edge of the print as is the case here. Nothing is lost if we simply trim from the left until the bright roof is eliminated, and when this is done the composition holds together splendidly.

Data: 6 x 6 cm. Rolleiflex; F:3.5 Zeiss Tessar; E. K. panchromatic film; print on Agfa Brovira, in M. Q. 10 $\frac{3}{4}$ x 11 $\frac{1}{2}$ " prints may be obtained at the price of \$6.00 upon application to Camera Craft.



"Once Upon a Time"

J. W. Hubbard

Amateur Medal Print

■ Mr. Hubbard shows a nice feeling for form and line in his selection here. What puzzles us is why he felt it necessary to resort to the paper negative process in making the print. The only advantage in that process is the facility it offers for control or alteration of the original negative. But there does not appear to be any necessity to control the image here. What we want is a good clean straight print so that the maximum rendition of textures may be obtained. Mr. Hubbard knows his paper negative process, and he has carried it through with a minimum of loss in texture, but loss there must be no matter how skillful the operator.

One occasionally gets the impression that some photographers are laboring under the idea that a paper negative print is *ipso facto* better than a straight print. Presumably because it takes more work to make one. The sad truth is that the exact reverse is true of a great many such prints. We are not arguing that paper negatives should be thrown overboard entirely. The process is a great help in attaining certain objectives and in carrying out certain styles of photography, but when textures are important it is bad, and when no control is required it is a lot of hard work for nothing.

Data: $3\frac{1}{4} \times 4\frac{1}{4}$ " Auto Graflex; 7" Heliar F:4.5; Defender XF Pan. exposed at Weston reading, aperture F:45; developed in Metol; paper negative on Velour Black F; 10 x 13" print on E. K. Opal G. Prints may be obtained at the price of \$10.00 upon application to Camera Craft. Prints will be exchanged with other prize winners in these competitions only.

Monthly Competitions

Contributors Please Notice

The steadily increasing circulation of Camera Craft makes it imperative that we allow our printers more time in which to produce the magazine. The date for judging these competitions each month must therefore be advanced. Beginning October 1st the competitions will be judged on the first day of each month instead of on the fifth day as has been our practice in the past. PLEASE REMEMBER TO SHIP YOUR PRINTS FIVE DAYS EARLIER THAN BEFORE. JUDGING ON THE FIRST DAY OF EACH MONTH.

Scoring for Club Trophy Cups

The following won points for their clubs in the Advanced Class: Lojse Erjavec, Peter Kocjancic, Pfeifer Marijan, Oskar Kocjancic and Ante Kornic, for the Fotoklub Ljubljana.

The following won points for their clubs in the Amateur Class: Victor Pokorny, for the Aluminum Camera Club; Don Kirby Oliver, for the E.P.I.C. Pool; L. J. Spuller, Jr., for the Photographic Society of San Francisco; and J. W. Hubbard, for the Taft Camera Club.

The following prize winner has no club affiliations: Philip Blew.

Contributing Clubs

Aluminum Camera Club (New Kensington, Pa.)	Los Angeles Camera Club
Camera Art Circle (Poona, India)	Miniature Camera Club of New York
The Camera Clique (St. Louis, Mo.)	Miniature Men of Cleveland
Camera Club of Long Beach (Calif.)	Nassau County Camera Club (Mineola, N. Y.)
Camera Club of Richmond (Va.)	Photo Pictorialists of Springfield (Mass.)
Champaign, Urbana Camera Club (Ill.)	Photographic Society of San Francisco
E.P.I.C. Pool of San Francisco	Schenectady Photographic Society (N. Y.)
Fort Dearborn Camera Club	St. Louis Camera Club (Mo.)
Fotoklub Ljubljana (Yugoslavia)	Taft Camera Club (Calif.)
Fotoklub Zagreb (Yugoslavia)	Washington Pictorialists (D. C.)
Fresno Camera Club (Calif.)	West Suburban Camera Club (LaGrange, Ill.)
Hartford County Camera Club (Conn.)	
Hamaica Camera Club (N. Y.)	

STANDING OF CLUBS

Large Club Advanced Class

Fort Dearborn Camera Club.....	30
Fotoklub Ljubljana	29
Los Angeles Camera Club.....	16
Photographic Society of San Francisco	11
Fotoklub Zagreb	4
Miniature Camera Club of New York....	2

Small Clubs Advanced Class

The Camera Clique	18
Baltimore Camera Club	6
The Pack Rats	2
Eastbay Camera Club	1
Washington Pictorialists	1

Large Clubs Amateur Class

Golden Gate Miniature Camera Club.....	4
Los Angeles Camera Club.....	4
Photographic Society of San Francisco	4
Miniature Camera Club of Oakland.....	3

Small Clubs Amateur Class

E.P.I.C. Pool	18
Riverside Camera Club	9
Aluminum Camera Club	8
Oklahoma Camera Club	7
St. Louis Camera Club	7
Washington Pictorialists	7
Camera Club of Richmond	5
Kamera Kranks	5
Nassau County Camera Club	3
Norfolk Photographic Club	3
Taft Camera Club	3
Crockett Photographic Society	2
San Jose Camera Club	1

Correspondence

Orchids to Mr. Morey

Dear Mr. Young:

I want to tell you how delightful I thought Mr. Morey's review of the P.P.A. show was. I have never read as good an evaluation of a photographic exhibition before. Not only was the writing very clever, but I felt that what he had to say about the photographs themselves, and in particular the various schools to which they belonged, was most astute. Congratulations to you, Mr. Editor, and let's have more of Morey.

Sincerely,

Willard Van Dyke.

Dear Mr. Young:

... However, my real reason for writing was to let you know, as I understand editors are anxious or at least mildly curious, to know what their readers think of what they have offered for reading, that the article by J. T. Morey on the 4th International Salon of the P. P. of A. struck me as being one of the best printed in a long, long time. . . .

Morey's criticisms were caustic but photography (I almost capitalized the word) needs more of his sort of comment.

You probably got plenty of squeals about the article but remember there are lots of us applauding. More POWER to YOU!

Sincerely,

J. H. Sammis.

No squeals to date.—Ed.

Why Do We Send Prints To Salons?

A Reply to Mr. Bristol

Dear Sir:

I accepted the invitation to send a print to the San Francisco Invitational Salon. I sent a print which I considered as good as I had ever made, of a subject which I think is my best. My friends concur in this and to date 32 sets of judges have found some virtue in it.

In the July number of Camera Craft an article appeared written by Horace Bristol reporting on the San Francisco show. After reading it I asked myself, "Why do

we send prints to salons?" He writes "Today there is no time for any of that thinking nonsense. We can capture the infinitesimal part of a second without thought so why think?" In spite of this sarcastic observation on the efforts of some of the world's finest pictorialists, no one can tell me otherwise than that practically every one of these men who were honored by receiving invitations to this salon gave a great deal of thought to the print they sent in. Perhaps a great deal more thought than they should have for the good of the business or profession they have to make living at. Knowing something of the methods of many of the workers represented, I know they do not run around with miniature clicking everything in sight, but are still using equipment whose use demands great care.

The tremendous amount of time, effort and thought that lies behind one who has reached the point where he would be invited to contribute to such a salon; the responsibility of choosing just one print as his considered best, and the knowledge that someone is likely to write some very scathing remarks makes me ask again "why do we send prints to salons?" No doubt that any of the prints should not be criticized. Every one of the contributors reached whatever heights he has attained because of criticism.

In the metamorphosis of an "exhibitor" there are, I think, some clear cut stages. First, there is the time when one does not make an odd negative from which a "clear" print can be made. Many never get past this stage. Eventually, after learning something of technique, the "longing" stage is reached, when magazines and annuals pick up, monuments to the desire to some day be able to do things like the "exhibitors" do. At last, just as the young bird learns to fly or the wild animal ventures a little way from home, one just must get ones feet wet. Some prints are sent off. And, if we get our names in print—lo! we have an answer to the question "why do we send prints to salons?" Some people never go

past this stage. Is it really a stage higher up?

The people who keep on advancing, making prints of things they like to photograph, are the real crowd who make up the "exhibitors." No, I am not giving us a pat on the back. I think we are a prize bunch of suckers, really. For a stage is reached eventually where we have so many requests for prints for exhibition that the thrill of seeing our names in print is gone. If we have the true exhibition spirit though, we are quite satisfied that in complying with the request we have helped give a community some pleasure through our contribution to an exhibition. This, and the fact that we are always learning and broadening out in the fields of art and technique are the sum total of result for our planning and endless hours of effort. We feel honored when we have acceptances and can take it on the chin when we have turn downs. It is rather a hard pill to swallow though, when we are told that because we can click so fast today that it is no longer necessary to think, that it is obvious from our efforts that we don't think.

Unfortunately I did not see the Salon. It happens that I live a couple of thousand miles or so away from San Francisco. Why did I send in a print? Just to put in time making it? To get the thrill of packing it up carefully so that it would arrive safely? Or was it for that greatest of all thrills—to open the parcel on its return and find the print cracked beyond repair?

I get a glimmer of the "why" when I remember the "exhibitors" who live close enough to "salon cities" to be able to run in and show their prints to friends. But why did I, who have no chance in the world to see the show, send in a print?

Perhaps a dozen people in Calgary knew that I had received an invitation. The same number will probably see the catalog when it arrives. To anyone who may later see the sticker on the back "Invitational" means nothing and San Francisco little more. We can motor there in a matter of a few days.

But wait, I am forgetting the stickers. It would not by any chance be possible

that I am supposed to stick those stickers all over myself or my car, get a special chest made on which to display my medals and hire a window to put in the certificates I have collected. Then I could roll out in all my glory one day with a big banner printed—"I have today received an invitation to send a print to San Francisco."

There is a great deal of personal satisfaction in having these "trophies of War" but I am sure the men who are at the top would not make any such use of them.

I have, for some time, been of the opinion that judges and critical articles make trends in photography. Exhibitors do take into account the judges they are sending prints to. If there is definitely no use in sending a print of a certain type to a show, it isn't sent. This is entirely wrong. The great pictorialists went their own way. Their pictures were great because they were of themselves. A biased mind cannot judge. In the course of my exhibition effort I have seen just four international exhibitions and until three years ago, none at all. In viewing these I have seen the reactions of various types of mind to the prints. One man will rave over something that another will not look at a second time. A judge to be fair at all must put aside his own likes and dislikes and consider what, if anything, the maker was trying to express. Because Mr. Bristol did not see examples of "The exquisite beauty scientific workers have found in macro-photography" or "a spot news photo that makes photography a living thing" it ill behooves him to label the makers of the prints shown, non-thinkers. The exhibitors sent their prints to San Francisco to give that community a show that would give it some pleasure in aesthetic relief from the humdrum of life, not to be criticized by an individual with pre-conceived ideas.

All exhibitions depend entirely upon the exhibitors and a few kindly remarks such as those by the eminent authorities and outstanding pictorialists of the previous article on the Salon (Camera Craft, June, 1937) will go a lot farther to keep them sending in prints than will remarks such as those of Mr. Bristol. I note with satisfaction that it was a minority report.

Club Notes

Calder Conducts Photographic Class in East Bay

Under the auspices of the Oakland Public Schools, a series of evening classes in photography will open September 13th. The classes will be conducted by Mr. Roland Calder.

This is Mr. Calder's second year as instructor of these classes and the enthusiasm of the students insures a mushroom success. Calder's experience in photography is of many years standing, both as a photographer and instructor. He also conducted the series of classes given at the California Camera Club a short time ago.

Classes will be held each Monday evening, at 7:15, for 16 weeks at the Technical Evening High School, Broadway and 49th St., Oakland, Calif. The enrollment fee of \$2.00 covers all Evening School Classes.

The course in Elementary Photography will place its emphasis on what to take and how to take it; the technical phases being limited, although complete instruction on developing, printing and enlarging will be given.

Instruction begins September 13th, and further details may be had on request from the Technical Evening High School.

Chicago Camera Club School of Photography

The Fifth Annual Fall Term of the School of Photography for the Advanced Amateur will be held every Tuesday evening from Oct. 5th to Dec. 7th, inclusive.

The instructors will be Harry C. Phibbs, Dr. George C. Poundstone, William C. West, Alex J. Krupy, R. S. Lund, and Carl Scheffler, Director of the Academy of Fine Arts, Evanston, Ill.

Applications for enrollment will be received on Tuesday evening, Sept. 28th, between 6:00 and 7:30 o'clock at the Chicago Camera Club Rooms, 137 N. Wabash Ave., Chicago, Ill.

Fourth Annual Leica Exhibit

Prints are now being received by E. Leitz, Inc., 730 Fifth Ave., New York City, for the Fourth Annual Leica Exhibit,

which will open in the fall of this year. As in previous years, this exhibit is planned to show the progress and advance made in photography with the Leica Camera and it is therefore open only to pictures made with the Leica.

Closing date for the receipt of pictures is Oct. 30th and complete details on the submission of prints may be had on request from E. Leitz, Inc., at the above address.

Miniature Camera Pictorialists

The Miniature Camera Pictorialists meet once each month in a competitive exhibit of members' work for the month. From this competition the outstanding pictures are selected and placed in the Club's collection.

For mutual education and benefit, the club would like to exchange prints with other clubs; sets to be returned in thirty days. The Club feels that, by observation of the work of other enthusiasts, the quality of all can be improved and they would be pleased to hear from any club interested.

Communications should be addressed to Mrs. Harry Champlin, Secretary, at 9708 Santa Monica Blvd., Beverly Hills, Calif.

Nicholas Haz

Mr. Nicholas Haz, now lecturing in the Orient, has continued his charming work as a photographer, in the Far East, and has just been elected an honorary member of the Photographic Society of Japan.

Ansel Adams Directing Yosemite Park Gallery

Ansel Adams and his wife, Virginia Adams, have taken over direction of the Yosemite Park Studios of Mrs. Adams' father, the late H. C. Best.

The studio will present a series of exhibitions interpreting the valley and its environs. The first show offers paintings and drawings by William Zorach; water color of Yosemite in autumn by Jane Berlandina; paintings of the high Sierra by John and Florence Tufts; Chiura Obata prints of the high Sierra; and Ansel Adams' photographs of Yosemite.

Notes and Comments

The New Mortensen School of Photography

We recently had an opportunity to visit the new quarters of the Mortensen School of Photography, and consequently can report at first hand the several advantages which the student will enjoy under the new arrangement.

He will have constant access to a large and fully equipped darkroom, especially designed for carrying out the special procedures in the Mortensen System of photography. Also available to all students is a large studio operating room with lights, backgrounds, props, etc., and most delightful of all a corps of exceptionally lovely models which are available without extra cost to the student.

An assistant to Mr. Mortensen is on hand to help the student with his practice work which is carried out between his personal sessions of instruction with Mr. Mortensen. The studio contains a large exhibition gallery in which are displayed about 100 of Mr. Mortensen's finest camera studies plus some of the best work accomplished by his students. For full information concerning the Mortensen courses, address the Mortensen School of Photography, Laguna Beach, Calif.

The Rolleiflex Salon

The Rolleiflex Salon and Exhibition of photographs recently on display at Rockefeller Center, in New York City, is now on tour. Pictures for the Salon were submitted in four group classifications: Pictorial, Portraiture, Technical and News. \$50.00 first prizes and \$25.00 second prizes were awarded in each group, as well as a \$100.00 prize for the best print in the show. John Gutman, of San Francisco, won the first prize in the Portrait Group and also the grand prize, with his portrait entitled "Arnold Schoenberg."

The reported excellence makes this show one all should see, so be sure to watch for its opening date in your city.

Harry Champlin Moves to New Location

Harry Champlin, whose famous formulas have received so much popular acclaim from minicams, has found that this same popularity spells larger quarters.

Mr. Champlin will be in his new location after September 1st and in space three times as large as his old quarters. A feature of the new store will be his greatly increased laboratory facilities.

After September 1st, Harry Champlin's address will be 9488 Santa Monica Blvd., Beverly Hills, Calif.

New Rolleicord

For many years the famous Rolleiflex Camera was the only concern of its manufacturers and its place among high-grade cameras was established by the perfection of its manufacture. However, with the tremendous increase in the popularity of photography in the past few years, the manufacturers realized that the Rolleiflex was out of the price range of many who wanted its valuable general features. To answer this need they produced the first model of the Rolleicord, selling at \$65.00, with the f:4.5 lens and at \$75.00 with the f:3.5 lens. The camera was an immediate sensation and has played an important part in the popularization of photography.

Now they announce a new model of the Rolleicord and at the unprecedented low price of \$55.00, which includes the features of previous models with minor qualifications that do not affect the high performance characteristic of these cameras. The new Rolleicord has a Zeiss lens, as do all Rolleicord cameras, a Triotar f:4.5, it has a high-speed focusing lens, luminous film-size ground glass screen, magnifier for ultra-critical focus, Compur shutter of one-lever setting and release type with speeds up to 1/300th second, eye-level observation of the subject feature, automatic film transport and depth of focus scale.

Other models of the Rolleicord are avail-

able at listed prices. For further information write Burleigh Brooks, Inc., 127 West 42nd St., New York City.

Leica Now Sold on Deferred Payment Plan

For the thousands of people who wish to extend their photographic scope with a Leica camera or who wish to add to their present Leica equipment but who do not find it convenient to make a substantial cash outlay at one time, E. Leitz, Inc. announce the creation of a Leica Finance Plan. Under this plan the purchase of cameras, new lenses, enlargers, projectors, or any other item of Leica equipment including Leitz Binoculars may be paid for over a period of time.

The rates on this Leica Finance Plan are low and payments may be spread over a period of one year. Usually dealers will be able to arrange delivery within forty-eight hours. Now a Leica or any item of Leica equipment is available to anyone without delay and without any severe drain upon present funds.

Through this special Leica Finance Plan every purchase will be insured against world-wide loss, damage or theft at the extremely low insurance rate of $1\frac{1}{2}\%$ per annum.

To those photographers who use their Leica equipment for business and professional purposes, the Leica Finance Plan offers possibilities for greater income through the added facilities possible with additional equipment . . . the increased income thus enabling one to pay out of earnings.

Under an arrangement with the Commercial Credit Company this Leica Finance Plan will be available through Leica dealers. If your dealer is not as yet able to accommodate you, write to E. Leitz, Inc., 730 Fifth Avenue, New York, N. Y.

Medo Contest Classes National Graflex Prints in "Candid" Group

The Medo Photo Supply Corp., of 15 West 47th Street, New York, announces a supplement to the rules of their \$1,000 prize photographic contest. Originally a limit of $2\frac{1}{4} \times 2\frac{1}{4}$ inches was placed on negatives admitted to the "Candid" class. This has been changed to $2\frac{1}{4} \times 2\frac{1}{2}$ inches in order to admit prints by National

Graflex owners under the "Candid" classification which is open to both amateurs and professionals.

Entries to this contest, which started July 15th and will run to October 15th, commenced to pour in early in August. Inquiries for the printed rules have been received by Medo's contest editor from almost every state and from Alaska. Announcement of the judges, who will be experts in their field, will soon be made. Copies of the Contest rules may be obtained from the Medo Photo Supply Corp., 15 West 47th St., New York, N. Y.

Kalart Speed Flash for Exakta

Owners of the Exakta Camera, here's news! The Kalart Company, New York, announces that the Kalart Speed Flash is the only American flashbulb synchronizing unit adaptable to the built-in synchronizer of the popular Exakta reflex camera.

This camera is fitted with phone tip jacks in the camera face. The electrical impulse is carried to the flashbulb when the reflex mirror springs upward just before the focal plane shutter is released.

The Kalart Unit, complete with bakelite battery case, battery, phone tip plug-in connectors and chrome reflector retails at only \$6.50.

New Laack Lens for Cinefans

Motion Picture enthusiasts will be interested in a new lens offering by Burke & James, Inc. This lens is a Laack anastigmat of F 1.3 aperture, and one inch focal length, in special focusing mount. Despite the high speed of this lens it maintains a high degree of correction and cuts with critical definition. Considering its high quality it is economically priced. You will find it listed in detail in their catalog which may be had by addressing Burke & James, Inc., 223 W. Madison St., Chicago, Ill.

Baseball Players Take to Argus Camera

The members of the Detroit Tigers recently visited the International Research Corp., of Ann Arbor, Mich., manufacturers of the Argus camera. Chas. A. Verschoor, president of the company, presented the ball players with Argus cameras and then proceeded to instruct them in the use of the candid camera.

As the athletes proved apt pupils, one wonders if they intend to use their Argus cameras for shooting close decisions. With

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a fast working dark room crew in the dug-out, their evidence would be most difficult to refute. Perhaps, the International Research Corp. have started what will soon be a new regime in baseball, with the ball players firing their cameras from all angles at every close decision. All we can say is pity the poor umpire.

RCA 16mm. Sound Camera Used at Purdue University

A group of students at the Purdue University have just completed a fifteen minute sound movie in conjunction with the Outdoor Songfest, using a 16mm. RCA Sound on Film Camera distributed by the Bass Camera Co., of Chicago.

The picture was shown before an audience of 4000 and was favorably received. It was the subject of a feature story in the Indianapolis Sunday Star, with candid shots illustrating the proceedings.

A new catalog describing this famous and widely used 16mm. Sound Camera is available upon request from the Bass Camera Co., 179 W. Madison St., Chicago, Illinois.

New Herbert Bargain List

Henry Herbert announces the completion of their new bargain list of cameras, lenses, motion picture cameras, motion picture projectors and photo accessories.

This new list of selected values from their certified stock of used and shopworn cameras and equipment should prove a boon to the camera enthusiast who is in the market for a guaranteed buy.

Write Henry Herbert, 483 Fifth Ave., New York City, for your copy now.

Eastman Announces New Kodak Specials

News comes from Rochester telling of more new Kodaks, namely the Kodak Specials Six-16 and Six-20.

These cameras will delight photographers who want fine equipment at a moderate price. The Specials provide a complete line of de luxe cameras with fast f:4.5 lenses, taking the popular $2\frac{1}{4} \times 3\frac{1}{4}$ or $2\frac{1}{2} \times 4\frac{1}{4}$ inch pictures. The cameras are constructed in the usual high grade, durable style to which Kodak users are accustomed.

The Kodak Specials are available with various grades of lenses and shutters. With Kodak Anastigmat f:4.5 lenses and Kodamatic shutters the Six-16 is priced at \$36.50



Kodak Special Six-20

and the Six-20 for \$33.00. With Kodak Anastigmat Special f:4.5 lenses and Kodamatic shutters the cameras retail at \$41.00 and \$37.50, respectively. The same lenses with Compur-Rapid shutters may be had for \$48.50 for the Six-16 and \$45.00 for the Six-20. The Kodamatic shutters have speeds of 1/10th second to 1/200th second, as well as time and bulb and include a built-in self-timer. Compur-Rapid shutters have speeds of 1 second to 1/400th and time and bulb. These models also include the self-timer.

Another feature of the Kodak Specials is the new optical direct-view, eye-level finder and the Kodaks also have a new body shutter release as well as the regular shutter release.

The Kodak Specials will be distributed during August and complete details may be had from your local dealer.

Thalhammer "Midget" Tripod

One of the pioneer manufacturers of photographic equipment, the Thalhammer Co. presents its new "Midget" Tripod for miniature and 8mm. cameras.

The "Midget" Tripod weighs only $2\frac{1}{4}$ lbs., and although it extends to 51", it measures 21" closed. It is of exceptionally durable construction and offers absolute rigidity in use. The entire head of the tripod is chromium finished and parts are fitted. The "Midget" also incorporates such Thalhammer patents as the "Instant-on"

Camera Plug, Locking Guide Handle and Offset Rocker.

The tripod is priced at \$18.50 complete and you may see it at your local dealer or obtain complete details from the Thalhhammer Co., 121 S. Fremont St., Los Angeles, Calif.

Raymond Brett Collerd Joins the Staff of Spindler & Sauppe

Raymond Brett Collerd has been associated with photographic work since 1911 and for many years made his camera pay his way on travels throughout the United States and Europe, as well as during his junior and senior years at Dartmouth College. However, his serious interest in photography dates from 1930, when after a lapse of several years, Mr. Collerd once more became an ardent camera fan. From this date also, he began an association with the Leica camera which has continued with increasing enthusiasm, since that time.



Raymond Brett Collerd

It is therefore fitting that Mr. Collerd has now joined the staff of Spindler & Sauppe, Inc., Western Agents for the Leica Cameras. He will be engaged in promotional work and trouble shooting and will be available for talks on miniature camera work.

Photographic clubs will find Mr. Collerd unusually helpful as his experience in club work is well grounded. He has twice been President of the Photographic Society of San Francisco, and is now in office in that capacity, and was also one of the founders of the Golden Gate Leica Club, now the Golden Gate Miniature Camera Club.

Communications from clubs should be sent to Raymond Brett Collerd, Spindler & Sauppe, Inc., 86 Third St., San Francisco, Calif.

New Willoughby Bargain List

The new Willoughby Bargain List No. 737 is now available for distribution. The list includes new material as well as many secondhand items listed at greatly reduced prices.

Every article in the Bargain List is guaranteed by Willoughbys and they allow ten days trial on any lens or camera purchased.

Write for this booklet of exceptional bargains today. Ask for Bargain List No. 737, from Willoughbys, 110 West 32nd St., New York, N. Y.

Winter, Inc.

New Store in Los Angeles

On or about August 28th, Winter, Inc., a new photographic store, will open in Los Angeles. William J. Winter and H. W. Scarborough, formerly associated with the Eastman Kodak Stores, Inc., in Los Angeles, are in charge and their experience with photographic merchandise and photography in general will prove invaluable to their customers.

The store will be large with completely modern fixtures, and will carry a complete line of photographic supplies both for motion picture and still photography. They will also carry a complete stock of photographic books and magazines.

An unusual feature for still photographers will be their two model dark rooms, one for miniature camera work and one for those using $2\frac{1}{4} \times 3\frac{1}{4}$ or larger negatives. These dark rooms will be available for demonstration and instruction, as well as for rental purposes.

For the cinefan, Winter, Inc., will offer a fine projection room and critical instruction on their customer's films.

Another unusual Winter, Inc., feature will be their "Dated Prints." Every print

or enlargement will be dated on the back giving the customer a definite record of his photographic progress and a definite time on his record photographs.

Winter, Inc., offers a store designed and stocked for the amateur photographer, both cine and still, so visit them now at 529 West 6th St., Los Angeles, Calif.

Raven "Haftone" Screens

The Raven "Haftone" Screens for the projection of movies and stills offer a perfection of tone that will please the most particular fan. Acting as a light-ray filter, the patented "Haftone" fabric softens harsh glare and gives richer detail throughout the projected picture. The screens are particularly effective in the projection of colored movies and stills bringing out every tone in startling naturalness.

These screens may be scrubbed with soap and water and folded without injury. They are available in many sizes and complete information may be had on request from the Raven Screen Corp., 137 East 25th St., New York City.

Kodachrome in Italy

A new regulation has gone into effect which makes it possible for tourists from the United States to expose Kodachrome Film in Italy.

No laboratory for processing Kodachrome Film is in operation in Italy and, as Italian authorities require official inspection of all motion picture film before it can be sent out of the country, tourists have been obliged to confine their photography to black and white film which can be processed in the Milan laboratory.

Those desiring to make Kodachrome pictures in Italy should apply to the Italian Tourist Information Office, Rockefeller Center, 626 Fifth Avenue, New York City, where they will be given a letter to the proper authorities in Rome. After the film has been exposed it should be delivered to the official designated in the letter who will forward it to Rochester for processing. The processed film will be inspected by the Italian consul and then mailed to the owner's home address in the United States.

New Buying Plan

The National Target & Supply Co., presents a new buying plan designed to aid camera enthusiasts in the purchase of

equipment they have been wanting to own.

The plan offers Leica, Eastman and Graflex Cameras on a down payment of 1/10th of the list price and allows as long as ten months to pay the balance.

As only new equipment is supplied, no trade-ins are considered. Shipment is made direct from the factory to you. This plan is a real opportunity for many photographers and complete details and price lists may be had on request from the National Target & Supply Co., Dept. H-9, 1273-25th St., Washington, D. C.

Infinol

The Raygram Corporation announces a new fine grain developer of unusual properties. The manufacturers claim that Infinol gives fine grain yet retains full contrast, rendering a grain as fine as the best working surface developers, with quality equal to Borax negatives. A scientifically developed formula, Infinol, will give full density without additional exposure and will not block highlights.

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New "Grant" Enlarger

The new "Grant" Enlarger offers a number of valuable features that insure convenience and success in its operation.

It is small, compact and easily portable, while maintaining a sturdy, durable construction. Using an ordinary 50 candle power automobile bulb, the enlarger remains cool in operation and guarantees economy. Its three lens condenser system renders maximum sharpness. It is a vertical enlarger and, with its 2" f:3.5 lens, makes a 16 x 20 enlargement on your table. Another feature of great convenience, is its built-in red light filter.

The new "Grant" Enlarger may be seen at your local dealer or complete details may be had from the Sun Ray Photo Co., 138 Centre St., New York City.

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◆Folding Reflex cameras, one Curt Bentzin 10 x 15 cm., with 4.5 Zeiss Tessar, one Miroflex 2 1/4 x 3 1/4, Zeiss Tessar 2.7, both like new and with all accessories. F. Miller, Financial Center Bldg., San Francisco, Calif.

◆For Sale f.o.b. San Francisco, Calif. Used B. & H. Cine Camera 70a with R. Mayer Plasmal F:1.5—one inch lens and case, \$150.00; B. & H. 16mm. film editor, rewinder and splicer, \$43.00; B. & H. Title writer \$36.00; Arri Step printer, \$55.00; Correx devel. outfit with 100 feet cel. apron (impr.), \$45.00; Remote Control, \$4.50; Weston Exposure Meter, \$20.00; Drying racks and drums; Aplanatic reflectors with folding stand, also spotlight and endless books on cine and still photography and other things, dispose the whole outfit for \$200.00 cash. Write to P. W., 2509 Sacramento St., San Francisco, Calif.

◆Series I Kodak Duo, 1/500, range finder mount, case, filter, reflecting finder, like new \$37.50, 9 x 12 cm. Voigtlander Avus, practically new, telephoto, flash synchronizer \$40.00. Memo \$5.00. Dr. John Haruff, Hollister, Calif.

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◆4 x 5 Auto Graflex 9 1/2" B. & L. Tessar lens, magazine, film pack and roll holder, like new, \$135.00. 2 1/2 x 3 1/2 Zeiss Icarette with Zeiss Tessar F 4.5 lens, for film pack, roll film and cut film with extras, like new, \$30.00. Dittman & Co., 2308 Clement, San Francisco, Calif. Bayview 9861.

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◆16mm. motion picture outfit. Must be bargain. Give complete details and state best cash price. F. Oricello, 373 Bartlett St., San Francisco, Calif.

◆Good used enlarger suitable for both 2 1/4 x 3 1/4 and Contax negatives; also Model 650 Weston meter. Wm. Ivy, Wasco, Calif.

◆In good condition one Eastman 5 x 7 Cartridge Kodak #5, either of the E or F model, preferably F. P. W. Tompkins, 236 Front St., San Francisco, Calif.

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◆Wanted position by an operator, portrait printer and Kodak finisher. 16 years experience. \$21.00 per week salary to start. Can give references. Homer S. Wyatt, 1039 Franklin St., San Francisco, Calif. Phone, PProspect 7859.

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"Girl of the Desert"

William Mortensen

Projection Control In Portraiture

William Mortensen

IN LOOKING back at a book after it is completed and irrevocably committed to type, one is always aware of some errors of emphasis, of some important matters that are slighted or taken too much for granted. So it is with *Projection Control* on a three-year perspective.* In looking it over, and in examining the results it has brought forth, I note one error of emphasis. The impression is somehow given that Projection Control is primarily a method of securing rather freakish pictorial results. It is, of course, admirably adapted to extreme grotesque and romantic subjects. But it is not in this field that Projection Control finds its most frequent and useful applications. Even I, who have perhaps a more than average bent for such subjects, find its greatest usefulness to lie in ordinary portrait assignments. Scarcely a day goes by that I do not employ some phase of Projection Control—in pictures of Jones's baby, his wife, his mother-in-law, or even of Jones himself.

The skillful use of Projection Control makes for better portraits. And, because it is so thoroughly photographic in its basis, *when it is skillfully and successfully employed*, it is not evident to the layman that any alteration has taken place. Herein was the outstanding error of a recent writer on "spot printing"; for the examples that he adduced were not justifiable either as good photography or as good drawing. In portraiture, Projection Control should be apparent only as *better pictures*, and should be no more obvious in the final result than any of the other darkroom procedures.

In this article I wish to discuss a few of the more humble and every-day uses of Projection Control—particularly in their application to portraiture.

*Camera Craft, 1934.



Fig. 1
Direct Enlargement
from Negative

Requisites

A negative that conforms to certain rather strict qualifications is the first requisite for the successful application of the various devices of Projection Control. This particular negative quality I have fully described on several previous occasions*, so I will here merely summarize:

1. The negative should be translucent and brilliant, never heavy.
2. It should contain a full range of half-tones.
3. It should contain a few definitely marked accents of full black and complete transparency.**
4. It should receive an exposure compatible with the range of half-tones in the light-area of the image proper.
5. It should be given an extended development, ranging from three-quarters of an hour to an hour and a half in Borax-Metol or similar fine grain developer.

This combination of clipped exposure and extended development takes advantage of the period of "tolerance" (which in most modern emulsions is considerable) between the attainment of gamma infinity and the incipience of fog. With a properly timed exposure there is a period of at least an hour when—for all practical purposes—absolutely "nothing happens" in the emulsion after the completion of development. Development may be complete in fifteen minutes, in twenty minutes, or in three-quarters of an hour; but by generously prolonging the development time, you protect yourself

*Projection Control, Chapter III, Pictorial Lighting, Chapter IV.

**In Figures 5 and 6 of my article in the August, 1937, *Camera Craft*, I have indicated the usual placement in portraiture of these highlight and shadow accents.



Fig. 2. Finished Portrait with Emphasis by Local Printing

against variations in emulsions, slight variations in exposure, and variations in the strength of the developer. ***.

Aside from the negative of correct quality, the only special bit of apparatus required in addition to conventional projection printing equipment is an "aperture board." This, in its simplest form, is nothing but a piece of black cardboard, about 12 by 14 inches, with an inch-and-a-quarter circular hole a little on one side of the center.

Uses of Local Printing

A phase of Projection Control that may find frequent application in average portraiture is that known as "local printing."

Local printing (also called "spot printing") consists in limiting the printing action of the negative to a small area of the image. This is usually done by interposing the "aperture board" just described so that only a small beam is projected onto the sensitized paper. The diameter of the printing beam may be increased or lessened by moving the board closer to or further from the lens. Further control over the shape and size of the beam is obtained by inserting one or more fingers through the aperture in the board. On some occasions the hand alone may be used instead of the board. By combining this procedure with a general printing it is possible to print some areas more strongly than others.

Local printing has two uses in portraiture: *emphasizing* and *balancing*.

First, the matter of emphasis. Portraits are frequently improved by accents of additional printing of certain salient features. The eyes, lips, and the shadows in the hair are most likely to need such treatment.

Figures 1 and 2 show that this emphasis may lend a certain distinction to an otherwise commonplace bit of portraiture. Note how the darks in eyes and hair, although they appear black in Figure 1, are made (in Figure 2) to appear even blacker and are given an increased pungency by "holding back" the surrounding areas. The aperture board was employed in Figure 2.

For success in this use of Projection Control, several precautions should be observed:

1. The negative must be of the quality described above. Local printing of this sort will not work with a dense negative.
2. The aperture board must be handled deftly and accurately. Careless handling of the board will produce a spreading "bruise" on the adjoining half-tones instead of the desired small and accurately placed accent.
3. Use this sort of emphasis sparingly. The whole value of the added accents is lost if they are scattered liberally throughout the picture.

Another use of local printing is for the *balancing of tones*. There are numerous common predicaments in which such balancing is called for.

1. *Balancing two heads in one portrait.* A quite frequent problem of the photographer nowadays is the making of a presentable portrait of mother and daughter in which daughter is sun tanned to the ultimate degree and mother has her customary indoor complexion. Ordinarily, with a negative of this combination, if you print for a good presentation of the daughter's face, mother will be anaemic and under-exposed; while if you print to give

***The significance of this period of "tolerance" is overlooked by a recent writer on negative quality who emphasizes the difficulty of predetermining the exact moment at which gamma infinity is reached. The existence of the period of tolerance makes unnecessary (for all practical purposes) any exact predetermination.



Fig. 3. *Direct Enlargement
from Negative*



Fig. 4. *Finished Portrait with
Balanced Tones*

mother's complexion a break, daughter will look like a relative of Joe Louis.

The same problem appears, in a less aggravated form, whenever a blonde and brunette are photographed together. It is also liable to be met whenever a man and woman are photographed on the same negative. (Figure 3.)

The reasonable and practicable solution of this predicament lies in local printing. In fact, it is the *only* solution, as such extensive retouching is quite out of the question. Figure 4 shows how the situation in Figure 3 may be corrected. The delicate half-tones of the paler face are first allowed to imprint themselves through the aperture board up to nearly the required density. Then the entire picture is exposed until the other face is properly printed. This procedure will secure a proper balance between the tones of the two faces.

2. *Balancing within the limits of a single face.* Very dark hair combines with a pale complexion to present a common photographic dilemma. As indicated above, both elements cannot be advantageously rendered at the same time; either the hair is excessively black and devoid of gradation or else the face is under-printed. (Figure 5.) By means of local printing with the aperture board it is possible to somewhat hold back the dark area of the hair and at the same time to secure a stronger rendering of the flesh tones. (Figure 6.)

Sunburn creates another solution that calls for balancing. A woman usually hides her ears under her bathing cap and so keeps them in a state of pristine pinkness while the rest of her face assumes various terra-cotta

tints. This problem is solved, in a manner similar to the one just mentioned, by giving the ears additional local printing by means of the aperture board.

Balancing is also called for when blatant and distracting notes of white are present—such, for example, as a handkerchief in a coat pocket. Such spots may be subdued and darkened by local printing.

Uses of Dodging

Another phase of Projection Control that is useful in portraiture is the process known as “dodging.” This is in effect the reverse of local printing, since it consists in holding back the print in chosen areas. This is done by casting a restraining shadow on the sensitized paper during projection. In practice all sorts of instruments are employed in dodging—the tip of the finger, the fist, the flat of the hand, a bit of cotton on a wire handle, a peacock feather, a cardboard cut-out, etc., and any other implement that the emergency and its inspiration may suggest. The choice of the instrument depends on the size, shape and location of the area affected.

According to the demands of the situation, two different procedures are followed in dodging:

1. Dodging during printing, with the negative in the enlarger.
2. Dodging after printing is completed, with negative removed from enlarger.

The first procedure is followed when small and limited areas are affected; the second, when alteration of tone is desired over a large part of the picture.

There are three common uses of dodging in portraiture.

1. *Correcting one-sided lighting.* Carelessness or reckless experimentation with your lights is liable to produce the all-too-familiar effect of a face strongly lighted on one side and lost in the shadow on the other. Of course, it is much preferable to get your lighting correct in the first place; but, in order to salvage an otherwise good negative, and to avoid the inconvenience of a re-sitting, it is sometimes useful to resort to dodging. By holding back the shadow area during printing with the finger tip or a bit of cotton on a wire, one may not only correct the gross unbalance in the lighting, but may actually pull up into visibility detail and half-tones that were apparently lacking in the light-area.

This unbalance is characteristic of uncontrolled lightings, notably of daylight when there is no diffusion from high fog or thin clouds. Most pictures taken by direct sunlight require some such restoration of balance. Note Figure 7. This is the original condition of the frontispiece. Note how, by means of dodging, some luminosity is introduced into the heavy shadows, and how the violence of the contrast is mitigated without loss of vitality. Local printing was used also to reduce some of the unpleasantly insistent white notes in the sleeve of the dress.

Dodging may also be used to correct some lesser faults in lighting, such as a dark corner in the background.

2. *Adjusting tonal relationships with the background.* When a Semi-Silhouette lighting is used*, it sometimes happens that there is too violent a contrast between the tone of the face and that of the background. This

*Pictorial Lighting, Chapter V.



Fig. 5. *Direct Enlargement
from Negative*



Fig. 6. *Finished Portrait with
Hair Tone Corrected*

may be corrected by dodging. After the face is properly printed, the negative is removed from the enlarger, and, with the shadow of the fist shielding the area occupied by the face, the background is given additional exposure. By this means there is achieved a much more pleasing relationship of face and background.

3. "*Dodging in*" for emphasis. A slightly different procedure is that known as "dodging in." This is done, as described in the preceding paragraph, with the negative removed from the enlarger, but with the fist held somewhat nearer the lens and gradually moved in until its shadow covers the entire printing surface. This procedure protects the central image, and most of the background, from alteration, but causes an almost imperceptible darkening of the corners of the picture. By this means added emphasis is given to the head of the portrait because the attention is held comfortably within the picture area and prevented from straying into the corners. Increased "dodging in" produces an effect of strong illumination opposite the head. Abuse of the procedure results in unpleasant and freakish "halo" effects.

Abuses of Projection Control

Projection control is a *photographic* tool. Any attempt to use it to secure a *non-photographic* result is bound to turn out badly.

This is particularly apparent in some recently published efforts at using "spot printing" to duplicate the effect of line drawing. Now, "line" as it is produced by pen or pencil, is simply not within the province of the photographic representation of a three-dimensional object such as the



Fig. 7

*"Girl of the Desert"
Direct Enlargement
from Leica Negative*

human face. The only photographic mode of representation of such an object is in terms of half-tone gradations. This gradation may be extended or it may be compressed, but gradation there must be. Heavily over-printing the contours of the face by means of the aperture board will not give a real line, but simply a narrow smudge which is accented at the expense of the characteristic photographic half-tones of the rest of the face. This local printing of the contour is not only tedious and difficult, but does not repay the effort expended. In at least one of the recently published examples of "spot printing," it is evident that the difficulty has been too great; for the alteration of the structure of the folds of the garment betray the fact that the pencil has been busy, and that it is not a true example of Projection Control at all.

Few faces have a contour sufficiently beautiful to warrant such accentuation. Indeed, the majority of faces become very vacuous when robbed of all character except that given by the contour. When the case really warrants such emphasis on the contour, there are better, easier and more conventional means of accomplishing it.

The best guide to the correct application of the numerous variants of local printing and dodging is to bear in mind that they are simply *methods for controlling tone*. They offer no means for alteration of structure. If you content yourself with balancing and adjusting tone, you can convert these procedures into valuable adjuncts to portraiture; but if you start tampering with structure, you are inviting disaster.

The Ideal Studio

Kem Weber

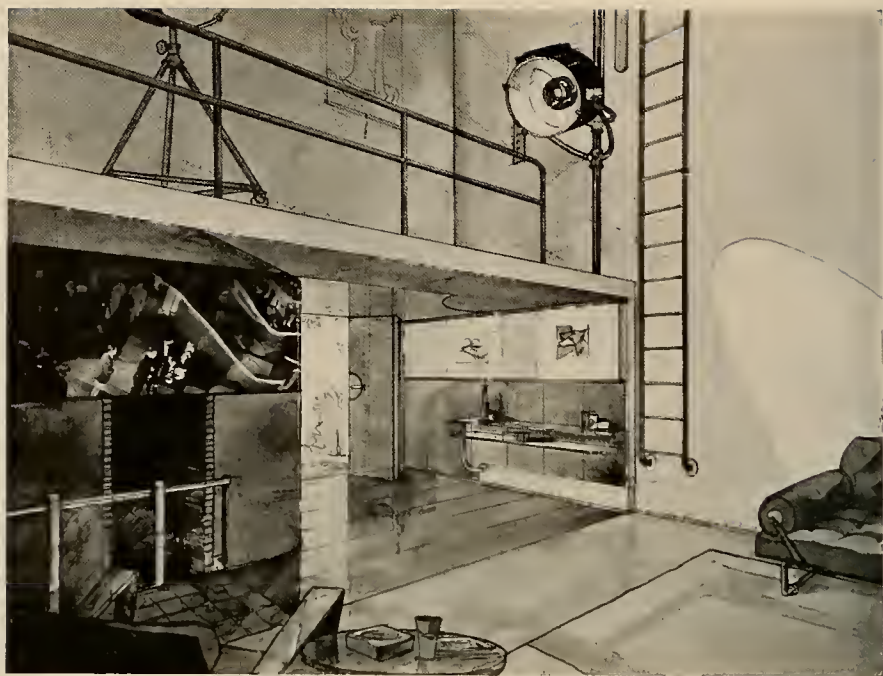
SOME years ago Will and I drove to Banning to take some pictures of a house I built down there. It was during the depth of the depression, but a gorgeous morning, endless road, and the only sound, that of a well-oiled motor.

It's kind of easy to start dreaming when all else is quiet. It's also easy to imagine the things we want to have. What I wanted was an ideal studio for Will. He was then working under the handicaps of an old wooden residence building where the open arch between living room and dining room gave the only chance for a "long shot," where a desk, books, files, lamps, work table, mounting press, drying racks, a couple of chairs and some magazines, a big ash tray, some unwrapped packages near the door, a couple of cameras, backgrounds, and all of the junk in the neighborhood was being constantly rearranged for the possibility of focusing a camera. If one didn't bump into one thing, one stumbled over cables, and even though everybody held his breath during the actual shooting, a street car would invariably come by and shake the whole house. Of course the developing was done in the kitchen, and it must have been trying for mamma to cook supper as well as attempting to keep the developer out of the stew.

I still think that working under those circumstances and accomplishing what he did is Will's greatest credit. The book "In Pictures" was made there.

All of this went through my head, and then one by one I pieced together in my mind a complete picture of the studio.

It all comes back to me now. The building should be on some street where there is business activity; not a residential district, not down town between a lot of office buildings, but somewhere like out on Sunset Boulevard where individual specialty shops get their clientele and where people expect to pay for quality. It should not have the ordinary show window, but a certain limited amount of display and an inviting entrance, easy to get into. As you look at the photographs and follow up the display, you should find yourself inside and someone should say "good morning," "good day," or "how-do-you-do."

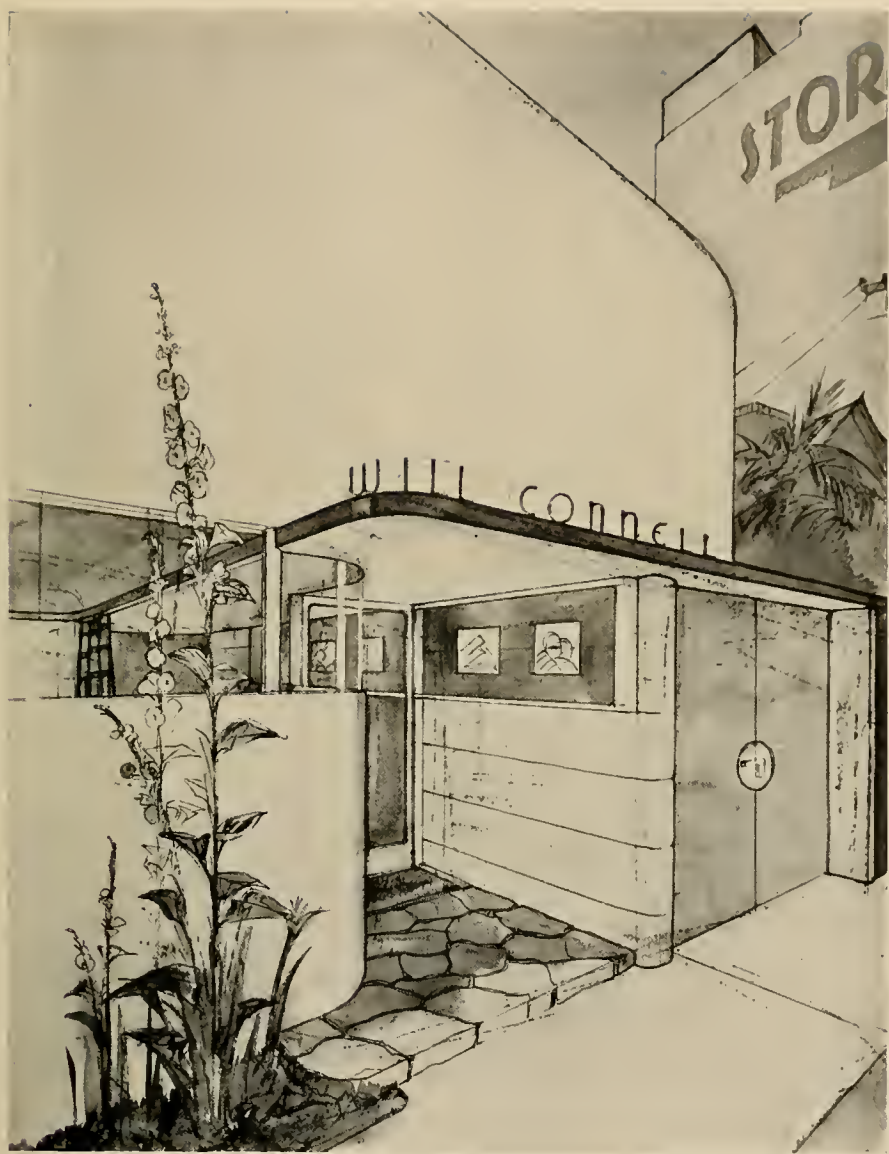


Interior view

A few comfortable seats, a business like looking desk, some files, and a pleasant female to do the honors. A small, simple door with a signal light leading into the studio. This is the shooting room with no daylight, and enough ground area to do the work—about 25 by 40 feet with an 18-foot ceiling. A balcony to shoot down from and to use for lighting, a pit in the floor to shoot at floor level, a light platform on a pivot to direct light anywhere in the studio; tall simple backgrounds in various contours, everything plain and mechanical looking, and yet a touch of warmth; a studio couch, some comfortable chairs, a fireplace, a well equipped dressing room, storage for props and a workshop, which is located over the office and dressing room; a garage arranged so that a car may be driven into the studio or through it into the open garden. That's right, when I do that one can unload props from trucks and put them into the prop room directly from the garage.—“you're going seventy!”

—if thoughts travel in one's mind, and one builds without asking for estimates, speed doesn't matter. “O.K., Will, I'm slowing down.”

—then the developing rooms can be in the back. There should be a stairway for living quarters above, kitchenette, living room, and library overlooking the garden. On the other side sleeping porch, private bath, and underneath it, the wide opening from studio into the garden. This would make an interesting looking facade from the garden side with the stairway all behind glass, a screened in porch and plenty of glass in the living room. The garden itself has a wall all around about 10 feet high with tropical

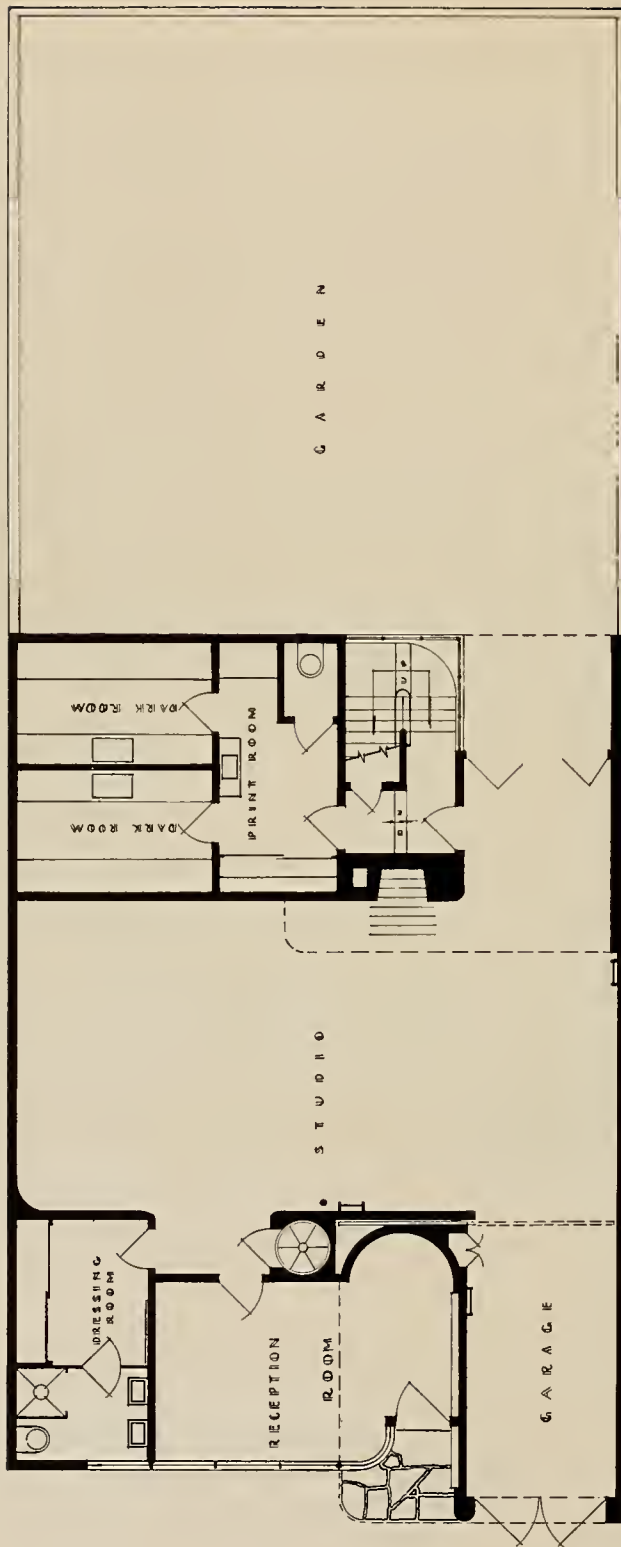


Entrance

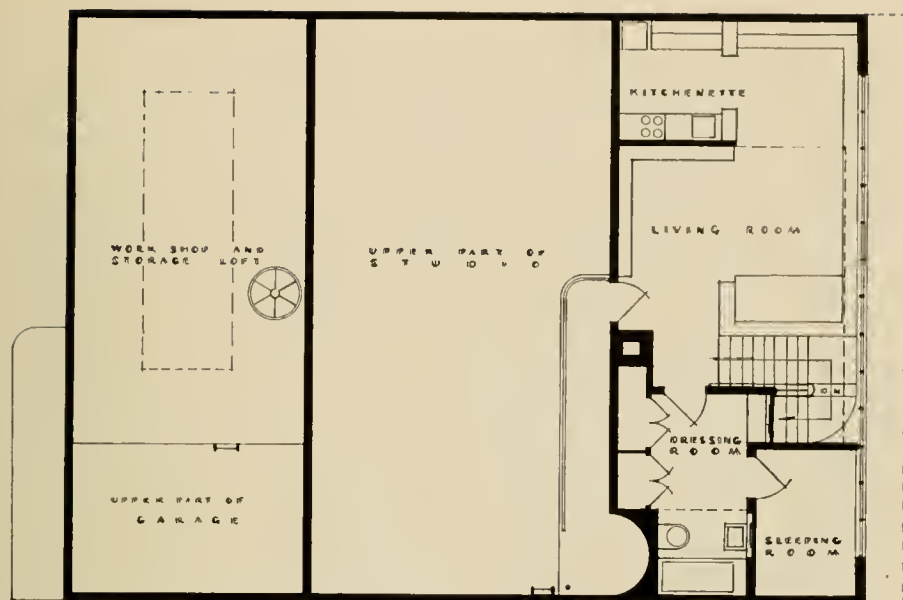
corners, dripping water, and moist moss; some slender trees on the other side, a fountain, pergola, benches, some comfortable outdoor furniture, partly lawn, partly gravel—

—long shots, close-ups, variation of lighting and shadows, and beautiful models posed in the sunlight or under the hot spots of high powered lamps.

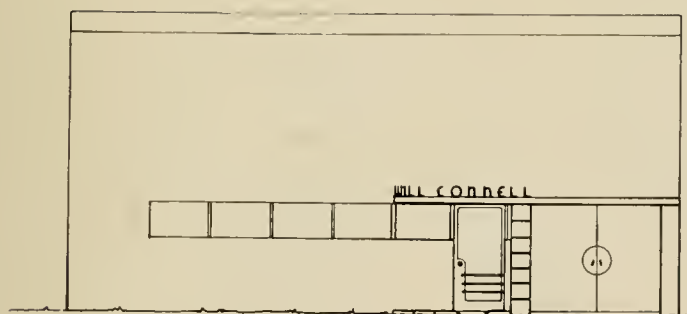
It was about then Will reminded me that we had just passed through
OCTOBER, 1937



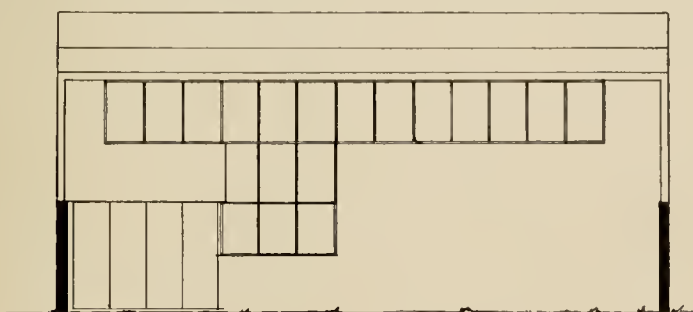
FIRST FLOOR PLAN



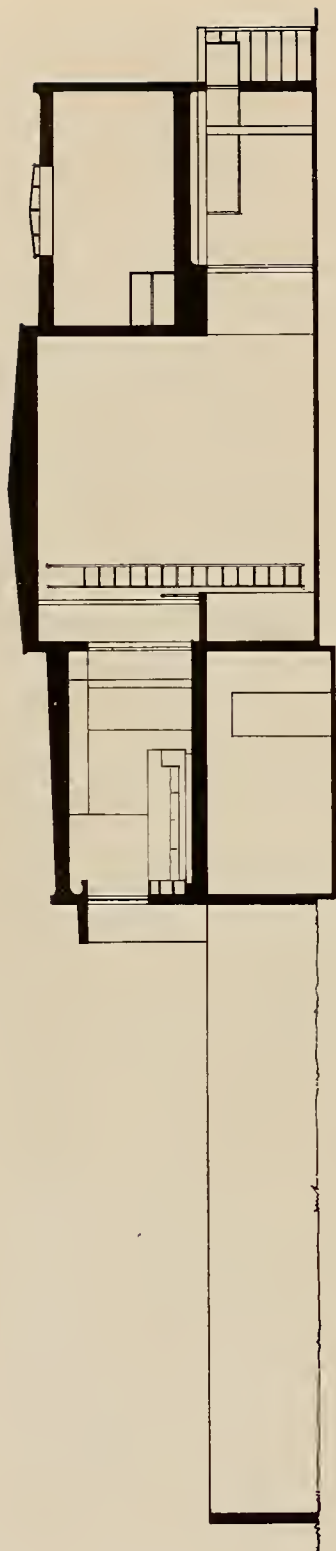
SECOND FLOOR PLAN



FRONT ELEVATION



REAR ELEVATION



LONGITUDINAL SECTION



LONGITUDINAL SECTION



Banning so we drove back, picked a lunch counter, and on a paper napkin it was all well recorded. In fact, I wasn't satisfied until I had drawn up the whole thing in detail. This was four years ago. Since then I have built Will an entirely different kind of studio (see April, 1937, issue), but that trip, the harmony between two souls has been an experience to both of us.

These plans have been lying around ever since until I talked to George Young about it, and as he wanted to have them I took them over to Will last week for new technical pointers, but there weren't any so here it is.

The Beginner In Flower Photography

Jack Wright

MOST men, I think, shy off from the photography of flowers chiefly because of a complete lack of confidence in their own ability to arrange the blossoms effectively. Most women and a few men, notably the Japanese, seem to understand the rather subtle matter of arranging objects in a striking and artistic manner, but such arrangement seems to be at least partly a matter of intuition and men feel they are not intuitive. And yet flower photography, as I have found out during the last six months, can be one of the most satisfying and enjoyable of all the branches of the camera art, even for the man who knows little of the subtle principles of artistic arrangement.

Many men, looking around for something at which to point their cameras, at one time or another make a few pictures of flowers but the result looks like what it is—"a photograph of a bunch of flowers"—and interest dies very quickly.

The reason why the "portrait of a bouquet" proves unsatisfactory is because there are too many flowers shown. A picture of an entire bed of pansies or a field of gladioli will show little detail and no texture of the flowers and will be as flat and uninteresting as a picture of a field of stubble. However, a picture of two or three pansies or a single stalk of gladioli can be a lovely thing which will bring lifelong satisfaction.

The first thing to do, therefore—and particularly for the beginner—is to isolate just a **FEW** flowers—perhaps only one, possibly two or three. This has a double advantage in that it allows the capture of all the texture and delicate beauty of shape and marking which the flower possesses and also it gets away from the necessity for elaborate arrangements, which are the great stumbling block of the beginner.

In the photograph of a flower, if you have not texture you have not anything, for the soft texture of the blossom, its delicate shape and the manner in which one color blends into another, must be captured for the picture to



Jack Wright

Night-blooming cercus, taken against background of black felt. Exposure: one second at f32. Print on Royal Brovira hard.

be successful—and they can be captured by anyone using care and possessing some technical ability.

Since the beginner in flower photography will concern himself chiefly with close-ups, a camera with a double-extension bellows will do the best work. I happen to use an old newspaper Speed Graphic which, until domesticated, seldom took anything less exciting than a fire or "the scene of the crime," but any camera with a double extension bellows or with a good set of protar lenses (or a portrait attachment) will do the work.

A camera with a ground glass makes the work much easier, for then you can select just the portion of the flower which you desire to emphasize with sharpest focus and can handle the problem better through knowing just how the blossom looks on the film. However, by careful measurement of distance, other cameras can, of course, be used.

I use a 4 by 5-inch camera but a $3\frac{1}{4}$ by $4\frac{1}{4}$ would do just as well. Possibly a 5 by 7 would be better, but few of us can afford the films for that size "box."

Regarding the use of miniature cameras—the Leica, Contax, etc.—I

can only say that some very lovely flower pictures have been made with these cameras but the capture of texture is bound to be considerably more difficult.

Concerning what flowers to photograph—this will to some extent depend on what flowers are available. Most of us, starting out, look for flowers that are striking because of their large size. This is a mistake, for remember that if the negative is sharp and brilliant, as it should be, you can enlarge the blossom to any size desired.

Look, therefore, for flowers having a delicate texture of blossom—like the gladioli, sweetpea, nasturtium, etc., and which have distinct markings. The pistils and stamens of many flowers, such as the old-fashioned passion flower, the tiger lily, rhododendron and again the gladioli are often the most striking part of the flower and flowers having unusual shapes or arrangements of pistils and stamens should be sought by the photographer.

Having found your flower, the next problem is whether to photograph it in its natural surroundings or under photofloods inside the house.

There is a certain charm about picturing a flower in its natural surroundings and many a beginner starts out by saying that interior pictures of flowers are artificial and he will make all his pictures in the garden. Then he runs up against two difficulties. One of these is the wind—and you will be amazed at the percentage of the time vagrant breezes are sweeping the garden, causing the flowers to dip their faces just at the instant the lens is opened. Since you will be using exposures of half a second or a second, for the most part, such a "bow" on the part of the flower will be fatal.

A second difficulty is in the matter of background. You want your flower to stand out as an individual—not as part of a crowd. In some cases this will be possible when the picture is taken in the garden, particularly if a sheet of cardboard is inserted behind the blossom you want to photograph, but very often the background of the foliage and other flowers will be so distracting that all emphasis on your particular blossom will be lost.

On the whole, therefore, it is more satisfactory to pick your flower, take it inside, and photograph it there.

Once inside with your favorite blossom, you run up against the problem of what type of background to use. A good background is neutral and does nothing to call attention to itself. As to color, a safe rule is to use a tint which will be lighter than the darkest tone in the picture and darker than the lightest tone.

More striking effects, however, can be obtained with a background of white or black. Some authorities advise against the use of the black background but, because photographic blacks are so rich and because the light-colored flowers stand out so strikingly against them, it is a temptation to use a black background, and some very striking effects are obtainable that way.

If a white background is used, much care should be taken with the shadows, which can be used to enhance the picture greatly. Change the position of the photoflood from one angle to another, watching the flower in the ground glass, until the shadow of the bloom on its light background enhances the picture. When the best position of the photoflood has been found, clamp it there.

If you are using one photoflood, the shadows will be on one side of the picture. Experiment by shading the photoflood with a book or a piece



Jack Wright

Pink rhododendron, photographed in the garden. Background of foliage printed dark to bring out the flowers. Exposure: one half second at f22. Print on Royal Brovira hard.

of cardboard so as to throw a shadow on the other half of the picture, but a little distance from the flower. This will give a pleasing effect of balance and will cause the flower itself to stand out.

Care with regard to the background will be repaid tenfold. One satisfactory way to secure a background is to go to a commercial artist and have him paint up a large piece of fibreboard, say about four feet square. One side can be painted a flat white and the other a dark green or gray, just a little lighter than black.

This can be used close up behind the flower, in which case a pleasing texture will be shown in the picture's background, or it can be used far enough back to be thrown out of focus, in which case the flower will stand out in sharp focus against an out-of-focus background.

The reason for the somewhat bulky size—four by four feet—is to permit the background to be placed some distance behind the flower without its edges showing in the picture.

It is possible, particularly in the case of small flowers, to use the 16 by 20-inch mounting board on which photographs are customarily mounted for exhibition, as a background, but great care will have to be used to see that the edge of the board does not "sneak up" and cut the flower at some inopportune point. Your wife may object to your attempting to "stow" the four by four foot background somewhere around the house, but its greater size will give you greater latitude in your "posing."

I mentioned photofloods a moment ago. One photoflood in a reflector will ordinarily provide all the light you need for a one-second exposure at F 32, and a flower usually has a more "dramatic" appearance photographed in light coming from one side only.

Any degree of cross-lighting desired can be secured by varying the position of the photoflood and experiments with the ground glass will show which lighting is the most striking.

It is even possible to secure "back lighting" of flowers by covering all of the photoflood reflector except a hole two inches across with heavy black paper. The photoflood can then be placed directly behind the flower and the circular, two-inch hole allows the light to shine through the petals in a very striking manner, which is particularly effective in the case of iris and other thin-petaled flowers. The exposure will, of course, have to be lengthened to make up for the reduced light and care must be exercised to avoid having any of the light strike the lens directly.

Exposure length, in photographing flowers, is best determined with an exposure meter. The best rule is to use an F:32 opening, wherever possible, with whatever exposure time is indicated by the meter. The reason for stopping down so much is to increase sharpness all over the flower and to improve rendition of textures. Ordinarily it will be found that one photoflood, used fairly close to the blossom, will be sufficient to permit the use of a one second exposure at F:32 without difficulty. Whatever changes in aperture and exposure are indicated by the meter can, of course, be made.

One word of caution regarding use of the exposure meter with flowers being taken against a dark background: Since the background reflects back very little light, the meter reading will be low and if no allowance is made the light-colored flowers will be overexposed and difficult to print. In cases like this use a smaller stop and a little less time than the meter calls for.



Jack Wright

Pink gladiolus. Photographed with white background some distance in rear of flower; shaded on both sides of flower. Exposure: one second at $f/32$. Print on Royal Brovira hard

Regarding the placing of the flowers—most of them appear more attractive and natural if taken vertically, although some very pleasing effects have been obtained with the camera pointed straight down at flowers lying on the background and with the light pointing downward.

If the flowers are photographed vertically, they must, of course, be supported in some way, which brings up the subject of vases. Needless to say, a vase should not be so ornate as to attract attention to itself away from the flowers. A "photo of a vase" is not what is wanted.

Usually a vase of fairly dark tones and simple design will be best as providing bulk and support at the bottom of the picture, without calling undue attention to itself.

It is not, of course, always necessary to show the vase, but in that case a mass of foliage, or at least some dark shading must be shown at the bottom of the picture to "support" the flowers as a bloom projecting into the picture at the end of a stem would usually violate the photographic rule calling for some sort of support to provide strength and solidity at the bottom of the photograph.

Having mentioned background, lighting, exposure and the vase, there remains the matter of arrangement of the flower or flowers themselves. I will admit being pretty completely at sea on this point and can only suggest close study of the lovely arrangements of Mrs. Christine B. Fletcher and others who are preeminent in this field. Where more than one flower is used, it is usually best to use an odd number, facing part of them toward the lens and part in other directions, some in complete profile. Some buds and some matured flowers should be used together to afford contrast, but avoid flowers even slightly withered, for your women friends will be quick to catch you up on that.

Study of successful flower pictures, supplemented with experiments of your own, will increase your knowledge of the somewhat delicate and difficult subject of arrangement.

One thing you will get from flower photography will be increased care in your technical processes. The same care which the miniature camera user habitually takes in processing his films will well repay the flower photographer, even if he is using four by five negative. A blemish in the film which would go unnoticed in a landscape or "candid" shot will call attention to itself very unpleasantly if it occurs in the background of a flower picture.

In other words, in a flower picture you want nothing to detract from the beauty of the bloom—no spots, blemishes or lines which are not where they should be—and to attain this end you will need to use 35 millimeter care in handling four by five film.

The matter of filters in connection with flower photography deserves plenty of study, for filters enhance flower pictures, just as they do most photographs, causing the rendition of color values to be more nearly correct. A red filter will lighten the rendition of red flowers and cause them to stand out from their foliage. A yellow filter darkens the rendition of blues. A green filter lightens the way greens are rendered, and many other effects are possible to the user of filters.

I hope what I have said about a few difficulties connected with flower photography will not deter anyone from going into it, particularly the man who is tied down to an office every day and desires something he can photograph at night. Although still a beginner, I have found it a delightful phase of the photographic hobby, making the photographer "flower conscious" and giving him a new appreciation of form, color and textures.

If, when you see a beautiful flower in a garden, a home, field or flower store, you get a small thrill which you did not get before, you are definitely the gainer and certainly such appreciation of the beautiful is in no way effeminate.

Color Separation From Kodachrome Transparencies

John S. Sims, Jr.

This letter, which Mr. Sims wrote to a friend who asked for help, is reproduced here because it contains much useful information.—Ed.

DEAR KEN:

In answer to your letter concerning the making of color prints from Kodachrome transparencies, first let me give you a few hints about the shooting of the originals.

I have found in my work that the finer prints are made from transparencies that are slightly on the over-exposure side. The reason for this is plainly seen in view of the fact that the gamma of the transparency is reduced to some extent by giving a longer exposure, and this is an item of importance since they are developed to a very high contrast to start with. I also have noticed that the blue overcast is the surest sign of under exposure and also may be from a decomposition of the latent image if the films are not processed as soon as possible after they are shot. Watch your lighting and keep it well balanced. Reflectors are an asset in outside work. I have found that the Kalart synchronizer works very well outside in filling in the shadows, although it is somewhat against theory to mix the two separate lights.

Since you are now using an enlarger without condensers I think it will work very satisfactorily, although I am using an engraving camera together with reflected light for illumination of the transparencies. I tested the type of enlarger you mentioned, and found it to be entirely workable. Here is the dope:

Using a film with a relatively low characteristic curve such as Eastman Portrait Panchromatic you will have less trouble than with a film of a higher slope. I am using this film entirely and have the exact data on this so that if you will use it you should have very little to worry you if your transparencies are correctly exposed.

For the lense system I have a Kodak Anastigmat which I stop down to f.11. My Goerz Dagor also works very well—the main thing is to use any lense corrected so as to be apochromatic, or corrected for the three principle colors.

For the light source I use a 250 watt Mazda light which has been broken in for at least twenty hours. This will give you a much more constant light source than any type of photoflood light, and will eliminate one more source of trouble.

Use the following formula for your developer. It is a constant energy developer working at 65 degrees Fahrenheit, and will develop six dozen four by five negatives with no appreciable difference in contrast or density. As soon as it does go out, it will go out completely so that nothing will develop on the film. I have found it ideal for all separation work.

Metol	246 grains
Sodium Sulphite	8 oz. 358 grains
Sodium Carbonate	370 grains
Potassium Bromide	46 grains
Water to make.....	64 oz.

Filters are a source of discussion at all times, and theorists will argue over their relative merits for hours—they seldom make a print so do not listen to them too much! The idea here is to use filters that are close-cutting, and the Wratten analysis set, numbers 29, 50, and 61 will give excellent separation.

I won't say anything now about masking processes. At the first they are merely a source of confusion, and while their use is of great help in some instances, for the most part you will find them of little or no value. Their use is merely to compensate for degradations in printing inks, and when using dyes they are not entirely necessary.

Enough for theory, equipment, and materials. Here are working instructions which have proven quite satisfactory, and through which my clients have all been satisfied.

Carefully clean off the glasses in the enlarger and place the Kodachrome between them. Watch the pressure plates so that you do not get Newton rings in them. These can cause a great deal of trouble, and can be eliminated almost entirely by relieving the pressure. Focus on a 4 by 5 (I have found this size quite satisfactory for the negatives) surface without the filters if using gels. By experiment find the correct exposure without the filters, and then use the following ratio:

Filter #29—	4 Factor
50—	36
61—	8

This ratio will vary slightly with different batches of the same kind of film, so it will be an excellent idea to check these if you have trouble by the use of a neutral scale placed alongside the kodachrome transparency. I presume

that you are going to use the Eastman Wash-Off Relief process which you have been so diligently mastering, so develop the negatives as follows:

Filter #29—5 minutes

50—6 minutes

61—5 minutes 24 seconds

Temperature is 65 degrees Fahrenheit

This will give you a gamma approximately .85 to .9 which is correct for your printing process. Be sure that you do not have a top density of over 1.3 as you will not be able to print through it on Wash-Off Relief film.

I might give you a few hints on the printing process:

I have found the Eastman dyes to be the finest as to color balance. If, however, you wish to transfer faster, let me know and I will send you some dyes that will transfer in from one and a half to two minutes. Above all, don't print your positives too deep. One of the greatest sources of trouble is to try to make the image take up an excess of dye, and then attempt to wash back until they are right. This will almost surely give you a flat print, and a mottled transfer. Print so that the highest highlight is slightly veiled. You will gain from experience just what this means, but is something to remember. Mix your mordants fresh, and do not mordant too much paper at once, and then let it dry. This is another source of mottled prints.

I think that this information should keep you busy for a few days. Don't let any of it frighten you—there's nothing difficult about it at all. I wish you would send your first negatives to me if you do have anything go wrong so that I may check them especially for contrast and density. And remember this: if you use another printing medium such as Chromatone or Carbro let me know about it. The factors worked out will not give negatives balanced to either of these processes. The gamma must be higher for Chromatone approximately 1 to 1.2 and for carbro from .9 to .95.

Yours very truly,

John S. Sims, Jr.

Reduction And Intensification With Direct Copy Film

William A. Oberlin

THE numerous formulae that are available for the reduction and intensification of negatives have been in use for too long a period for any one to contradict the claims made for them. However, these claims are usually too broad or too indefinite, and it is impossible to predict with any

degree of accuracy the extent to which the process of reduction or intensification will be carried. And with most of the formula, the negative is beyond repair if the results obtained are not what were intended or desired. The following procedure is offered as a means of accomplishing this reduction or intensification in such a manner that the degree of change is determinable before hand, with the added advantage of retaining the negative in its original state.

Before presenting the details of this process, a few words on the proper meaning and understanding of reduction and intensification are in order. Intensification is regarded as any process which increases the contrast of the negative, this being done by increasing the density of the negative, either by the addition of more silver to the silver particles already present, the addition of other compounds to the silver, or by the conversion of the silver into other chemical compounds which are more opaque than the silver. Any of these processes increase the time required for printing, but this would be no advantage unless the contrast were changed, otherwise a weaker printing light could be used, and the results would be the same. These processes, however, lengthen the scale of the negative, giving it more contrast, with the result that a print can be made on a paper of less contrast than was possible before, or what amounts to the same thing, a print on the same paper as used before will show more contrast.

Reduction is usually considered as a reduction in density, and not as a reduction in contrast, and is employed on over-exposed or over-developed negatives. With the exception of the persulphate formula, all the methods given for reduction actually increase the contrast of the negative, so that, disregarding the effect on the printing time, the same result is obtained as with intensification formulae, i. e. a paper of longer scale must be used after reduction.

Those who actually wish to reduce the contrast of a negative, so that they can use a paper of more contrast in making the print, are limited to the persulphate method, or perhaps to the chromate intensification process wherein the redevelopment is cut short. This latter process has its advantages if it could be controlled, but due to the amount of guess work involved as to the point at which redevelopment should be stopped, one is apt to end up with a negative where all the contrast has been eliminated, or where the contrast has been increased.

The following procedure has been worked out to enable one to intensify or reduce a negative a definite amount, so that one can prepare a negative suitable for printing on any desired paper, provided that he knows what the scale or contrast range of that paper is, and the scale of the paper required to print from the negative in its original state. The determination of the printing range of any paper can easily be done by means of a step wedge. This step wedge is merely a strip of film graduated in steps of varying density, ranging from zero to the maximum obtainable. A contact print is made from this on the paper for which the scale is to be determined, and the number of steps visible between the deepest black and the faintest grey are counted. If each step on the wedge transmits half as much light as the one preceding, and the print shows five steps visible, then the printing range of the paper will be $2 \times 2 \times 2 \times 2 \times 2$ or 32. The wedge made by Eastman is

graduated so that each step varies by the ratio of 1.414, requiring two steps to double, so that the same paper on this scale would show ten steps. This wedge allows a more accurate determination of the scale of the paper, and was used for the table given below.

It is hoped that someday in the future, manufacturers of printing paper will give the actual printing scale of the paper, instead of classifying the papers by a system of symbols and initials which require the aid of a hieroglyphic expert to decipher. The present system of "soft," "normal," "medium," "contrast," etc. would not be so bad if all "normal" papers made by different manufacturers possessed the same numerical scale, but such is not the case. The same grade of paper from different manufacturers will vary 100% or more in actual printing range, so unless one confines oneself to a single grade of paper, he will have to determine the scale of each grade of paper himself.

The process of reduction and intensification is carried out with Agfa Direct Copy film. This film is an innovation in the photographic realm, as on exposure to light, it develops up clear. Printed in contact with another negative, this film yields a "negative" on development, instead of a positive. If the resultant negative is too thin, too much exposure was given, and if too dense, insufficient exposure was given, this condition being the reverse of that to which one has become accustomed. This film has about the speed of contact paper, so that the procedure may be carried out with a yellow darkroom light.

If one regards intensification and reduction merely as an increase or decrease in density, and cares not what happens to the contrast of the negative, his problem is simplified, as all that is necessary is to make a contact print from the negative on this film, and develop in the normal developer listed below, regulating the printing time so that the resultant negative will have the desired density. But for those who have negatives that are too flat or too contrasty to print on a desired brand of paper, or possibly on any paper at all, the following data should prove of some help. It might be particularly valuable to those who restrict themselves to the soft chloro-bromide papers or to other soft papers which require negatives of considerable contrast, all trick developing formulae to the contrary.

If it is desired to decrease the contrast in the negative so that a print with less contrast can be obtained on the same brand of paper, or so that a more contrasty paper can be used than was used originally, a contact print is made from the negative on the direct copy film, and developed in either one of the "soft" developers given below, the choice of these two depending on how far it is desired to carry the flattening process. If it is desired to increase the contrast in the negative, the direct copy film is developed in the "contrast" developer. The density of the resultant negative is controlled by the printing time, this being regulated according to personal preference. Like all other sensitive material, there is a certain range in which the contrast of the negative is proportionately correct, while too thin or too heavy a negative results in decreased contrast. This process may, of course, be repeated, if the intensification or reduction of contrast has not progressed far enough, by making a second copy from the first copy.

Besides the developers given below, others could be used and will be used, but the results obtained with them will have to be checked in the same manner as were these four, so that one will know how much change in scale is being effected. In determining the change of scale obtained with these different developers, the following procedure was carried out. A strip of the direct copy film was printed in contact with the Eastman step wedge, and developed in the formula in question. Contact prints on various grades of paper were then made from this duplicated wedge, and these prints compared with prints made from the original wedge. When two prints were found to be identical, the difference in scale of the paper on which the two prints were made showed the change that was effected in the negatives.

The formulae for the four developers are as follows:

	#1 Soft			#2 Soft		
	Avoirdupois		Metric	Avoirdupois		Metric
Water	20 ounces	1000	c. c.	20 ounces	1000	c. c.
Metol				35 grains		4.0 grams
Sodium Sulphite (Anhy.)	52.5 grains		6.0 grams	105 grains		12.0 grams
Hydroquinone						
Sodium Carbonate (Mono.)	52.5 grains		6.0 grams	105 grains		12.0 grams
Potassium Bromide				5.28 grains		0.6 grams
Glycin	17.5 grains		2.0 grams			
Developing time at 65° F.	20 minutes			4 minutes		

	#3 Contrast			#4 Normal		
	Avoirdupois		Metric	Avoirdupois		Metric
Water	20 ounces	1000	c. c.	20 ounces	1000	c. c.
Metol	30.6 grains		3.5 grams	21.9 grains		2.5 grams
Sodium Sulphite (Anhy.)	525 grains		60.0 grams	153 grains		17.5 grams
Hydroquinone	78.8 grains		9.0 grams	13.1 grains		1.5 grams
Sodium Carbonate (Mono.)	350 grains		40.0 grams	131 grains		15.0 grams
Potassium Bromide	17.5 grains		2.0 grams	4.4 grains		0.5 grams
Glycin						
Developing time at 65° F.	5 minutes			5 minutes		

Formula #1-Soft reduces the contrast of the negative five to six times. In other words, if the paper required to make a correct print from the original negative has an exposure scale or printing range of 60, a paper with a scale of 10 or 12 will have to be used in making a print from the reduced negative.

Formula #2-Soft reduces the contrast of the negative only one third as much as formula #1. If the paper required to print from the original negative has a scale of 60, a paper of scale 30 will be needed to print from the reduced negative.

Formula #3-Contrast increases the contrast of the negative five times. In other words, if the original negative is printable on a paper of scale 12, the intensified negative will be printable on a paper of scale 60.

Formula #4-Normal does not increase or decrease the contrast of the negative, the duplicated negative being a true duplicate of the original.

For those who have no method of determining the scale of the paper they are using, the following list is submitted. These determinations may not agree exactly with the results obtained by other workers, due to slight differences in opinion as to what constitutes the faintest grey or "threshold grey" and absolute black, and whether both or only one of these steps is counted in calculating the scale. But as the results shown were all obtained by the same method of observation and calculation, the results are at least relative, and should serve as a satisfactory guide. Only one developer was used for all of these papers, namely, Eastman D-72.

Brovira, Extra Hard	8
Velour Black, Contrast	11
Brovira, Hard	16
P. M. C., Contrast	22
Novabrom, XV	22
Velour Black, Medium Hard	27
Brovira, Medium	32
Artex Projection, Normal	32
P. M. C., Medium	44
Velour Black, Normal	44
Vitava Opal	54
Indiatone	64
Novabrom, Normal	64
Dassonville	64
Velour Black, Soft	90
Brovira, Soft	90

This list is far from complete, and does not show that a matt surface and a glossy surface of the same emulsion will vary possibly 50%. The determinations given above were all made on papers with approximately the same surface, such as Velour Black "DL," P. M. C. "11," Brovira "Royal," Novabrom "K32," etc.

And as it seems to be unfashionable in this era to write or think in terms other than "fine grain," this article concludes with the statement that the intensified or reduced negatives obtained by this process retain the original grain of the negative duplicated, and do not give a bromoil or paper negative effect as is obtained with many of the chemical reduction and intensifying processes.

Cinema Section

Edited by

William A. Palmer

Stills, Movies, Or Both?

FEW are the movie camera workers these days who do not have a still camera of some sort among their paraphernalia. Many photographic enthusiasts are equally divided in their interest in stills and movies, and still others are primarily still workers who own movie cameras. So there is inevitably a conflict in the mind of the picture hunter as to what camera to take along on the current excursion, or if both types of cameras are taken along, which should be given more attention. There is no denying the fact that one cannot take both movies and stills of a subject at any one "sitting" and do justice to both. One must concentrate on one or the other for the time being and choose the subject matter, lighting, and composition accordingly.

There are certain fundamental differences between movies and stills which give each an advantage on certain occasions, and it is these differences which give the die-hard "stills only" or "movies only" bugs the excuse for their narrow attitudes in photography. Each sees only the series of conditions under which his particular type of work is at an advantage, and fails to realize that there is an entirely different type of work that he might do in the other medium.

To assist in answering the perennial question, "Shall we take movies or stills?", it might be a good idea to set down a list of some of the more fundamental differences between the two mediums so that the characteristics of one can be compared with similar characteristics of the other:

STILLS

Each picture or scene is complete in itself and needs no other companions to build up interest.

A still can be shown and appreciated any time at any place without special equipment or preparations.

Stills do not necessarily have to tell a story, but may give merely a pleasing impression or furnish a dec-

MOVIES

A single scene is virtually useless without a context. Its showing time is limited and it is only a part of the general impression created by a number of scenes.

Movies need a place and a larger amount of free time. They can be appreciated by a greater number of people, can be shown in larger doses, and tell a more natural and more forceful story.

Movies to be worthwhile should be groups of scenes put together in such a way as to tell a definite story. A

orative effect. This is especially true of pure scenic shots which, if good, can be appreciated no matter how diverse the subject matter.

Composition is all important in still work of the highest class.

Composition can be created and altered, after the scene has long since been "shot," by the well known methods of print control and trimming.

Stills can be caught with very little preparation since only one successful candid shot, out of a large number of attempts, is a satisfaction.

Stills can be worked with in little dabbles and are fine for those who like a casual hobby in which the majority of the fussing can be done after the picture is taken. Each still is a unit which can be shown as soon as completed.

A still scene can properly have more elements and include more detail, because it can be viewed first to get the general impression and then studied for detail.

In general then, because stills are independent units and movies are collections of associated units, the amount of time available can well be the determining factor as to what kind of picture is best to take. This is especially true of inanimate subjects such as scenery and architecture. For living subjects, family record pictures of the children and sports the movie is at an advantage even though these subjects must be caught in a limited time.

When traveling or on vacation, one should always take both still and movie camera along, but rather than take both stills and movies of the same subject,

limited amount of scenic material, especially if in color, need not be story telling, but is always helped by a continuity.

Composition is limited in movies because of an invariable picture shape, and motion which makes composition always a variable. Continuity takes the place of composition as the most important factor outside of matters of mechanical technique.

Composition in movies must be decided upon at the time the scene is photographed. All "effects" and changing of field must be done in the photography by the use of telephoto lenses and matte boxes. (unless fancy duplication methods are available.)

The best movies require a good deal of planning and preparation since a large number of pot shots are boring and one or two such shots are almost worthless. Candid shots made to fit in with a pre-determined plan, however, will have an appeal far stronger than any candid stills.

Movies usually need more extended periods of activity, needing a good deal of work to tie the loose ends together before the completed film is ready to be shown. A moving picture is a project in which many units are combined and any one unit does not stand by itself.

Each movie scene must be such that the subject matter can be taken in at one glance. The various details that are picked out of stills by close inspection, are shown in movies by close-ups so that four or five individual shots in movies are often used to cover the subject matter of one still.

it is better to decide what subjects are more natural movie material, and which are still material. Then one can concentrate on one or the other at different times and do justice to both. Of course an ideal arrangement, when a man and wife are traveling and both are photographically minded, is for one to take all the stills and the other all the movies.

Projected Color Stills

LATELY the miniature camera and color film have been used so as to take advantage of the more complete attention that a projected picture in a darkened room can command. The projection of the small Kodachrome slides is by far the best way to view these color stills since there is no simple means of making color prints on paper. A wonderful brilliance in colors and a pseudo-stereoscopic depth are characteristics of projected color pictures and for inanimate objects they are unexcelled. The big advantage that the projected stills have over the moving picture scene of the same inanimate object is that the still can be viewed as long as one wishes without costing any more than a short flash. Thus scenic and architectural subjects in which there is no motion, can be photographed at comparatively little expense for long periods of "screen time." The projected stills are not very pleasing when people are shown, however, because the "freezing" of the subjects in a scene, otherwise so very natural in full color, is apt to be even ludicrous. We have become used to this static quality in ordinary stills on paper, but when we view the same picture in a darkened room without distractions, they seem particularly dead.

Combined Movie and Still Projection

It is entirely feasible to combine the abilities and economy of the miniature color stills with the more alive color movies, giving a show in which the still and movie projectors are used alternately. For example, the Kodachrome stills of last summer's vacation trip could be worked in with the movies of the same excursion by splicing short lengths of black film at those points in the movies where the stills would fit it. A foot of black film would be sufficient to give the signal for stopping the movie projector and turning on the light for the still projector. Such a show would be a good deal smoother and more satisfactory than showing first all the movies and then going back over the same subject, showing the stills.

In order to give a smooth combination projection of stills and movies, it is necessary to make a couple of changes in the ordinary still projector. The usual lens of the still projectors gives too large a picture size, at a given distance from the screen, to match the movie projector. Since the two projectors must be

placed together to be convenient to switch from one to the other, the discrepancy in size of the pictures looks very bad, the stills being about twice the width of the movies. The size of picture given by the ordinary movie projector lens has been found to be most satisfactory for the ordinary viewing position sitting immediately in front of the projector, so a longer focal length for the still projector is the logical solution to the problem. Sixteen millimeter projectors have a two inch lens as standard equipment so an eight or nine inch lens is necessary for the Leica-Contax size still projectors to give a matching picture. If both vertical and horizontal compositions are to be used in the stills, the nine inch lens is preferable.

Most manufacturers of the still projection equipment should be able to supply the longer focal length lenses specially fitted for the projector, but if they cannot supply them any theatrical equipment supply house can. It may be necessary to have a little work done on the projector to hold the lens, which must be placed further away from the film plane.

The other change that should be made in the still projector is the reduction of the intensity of the illumination. Most still projectors give quite a bit more brilliant a picture for the comparable movie size. The intensity can be easily reduced to match the movie projector by placing a lower wattage lamp in the projector or even more simply by placing a stop diaphragm in front of the lens. The stop diaphragm can easily be made by cutting about a half inch diameter hole in a lens cap which will fit the projector lens. Usually the half inch diameter is just about right to bring the light intensity of the still down to that of the movie projector with a 500 watt lamp, but the exact size necessary may have to be determined by trying several different sizes.

In operating the two projectors alternately the most convenient arrangement is a switch which will run the movie projector in one position and the still projector when moved to the other position. Thus one switch operated by one hand will control the whole show, leaving the other hand of the operator free to change slides in the still projector. Extension cords with this type of switch can be purchased from Eastman Kodak Company for this type was supplied with the model D Kodascope. Other Eastman projectors have a switch of this sort built in for the purpose of controlling a lamp providing room illumination while the projector is not operating, and automatically turning off the light when the show starts. With this type of machine it is only necessary to plug the still projector into the socket provided and whenever the movie projector is stopped the still projector will automatically be turned on.

For those who wish to make up a special switch, a single pole double throw switch can be purchased from a radio store. This can be conveniently mounted on the motion picture projector together with a regular 110 volt A.C. receptacle. For those who are unfamiliar with electrical connections, the clerk from which the switch is purchased will be glad to point out how the terminals should be connected.

The little toggle switch and the receptacle can be mounted on the instrument panel of many projectors, or if there is not enough room, may be mounted on a small piece of bakelite which in turn is mounted to some part of the projector. Such a switch when not used for combined still and movie shows can be used to turn on a floor lamp when the projector is shut off as in the case of the Eastman model K and L projectors.



"Stowing Nets"

S. S. Smith

St. Louis, Mo.

Advanced Medal Print

■ Mr. Smith has recorded an interesting bit of fishing activity in this picture. We would like to suggest two small improvements, one possible and the other not. It appears that the highlighted edge of the wharf constitutes a rather strong line which tends to catch the eye and draw it out of the picture in the upper left. This line is not really essential to the completeness of the composition, so it is possible to trim down from the top until the bright oval top of the pile is eliminated. One could wish that the figure had been facing a bit more to the right when the shot was made. The action would then have been more evident and would have conformed a little better with the composition.

Data: $2\frac{3}{4} \times 3\frac{1}{4}$ " Plaubel Makina; Agfa Superpan film developed in Edwal 12; $13\frac{1}{2} \times 16$ " print on Agfa Indiatone.

Second Award
Advanced Class

■ This is very interesting subject matter. The white horse certainly provides a most emphatic example of a strongly marked center of interest. One might wish that one or more of the horses could have been placed nearer to or farther from the camera, so that the level of their backs would not present an almost continuous straight line. Such a grouping would appear most unsatisfactory in an open field, but in the present case the weakness is minimized because the vertical lines of the bridge tower and the reflections in the water help to break up the undesirable horizontal. Slight dodging in of the corners of a print is most certainly a legitimate and effective means of holding the eye securely within the picture space. It seems to us, however, that the device has been over-done in this instance, especially in the two lower corners.

Data: 11 x 14" print from paper negative.



"Horses"

*Dr. Max Thorek, F.R.P.S., F.R.S.A.
Chicago, Ill.*



"It Smokes"
*Slavko Smolej
Ljubljana, Jugoslavia*

focus, for these are the elements which will enhance the effect he is after.

Data: 6 x 6 cm. Voigtlander Superb; F:3.5 Skopar; 1/15th sec., at F:3.5, on Perutz Pan film; 11 x 14" print on Agfa Brovira Studio.

Third Award
Advanced Class

■ It is up to each photographer to decide for himself whether he prefers to work in a realistic vein, making the best possible use of his medium to record detail and gradation as completely as he can; or in the romantic vein, emphasizing mood and emotion and sacrificing literal values for the sake of a heightened romantic appeal. What each photographer must avoid is a confusion of these two major approaches to the medium. Many a photographer is thinking in one vein and photographing in the other. Such contradictions, when not entirely evident in the picture itself are revealed by the title. A very matter of fact rendering of a subject is given a high-sounding romantic title, for example. It is plain that Mr. Smolej is not bothered by such a conflict. He has chosen to render this subject in romantic fashion, emphasizing the atmosphere and the emotional qualities of even such a prosaic subject as an iron foundry workman. To that end he selects a backlighting, and soft



"Buttons"

Herbert P. Bond
Hollywood, Calif.

■ Mr. Bond has caught a most unusual expression in this picture. It seems to us that the cat is clearly saying: "My God, is that guy taking my picture again." It is just such peculiarities of expression as this that give pictures of this kind their delightfully humorous qualities. Observe that Mr. Bond has permitted the distant parts of the cat's body to go so completely out of focus that they present only a tonal area without form. Under the circumstances (close camera position and required short exposure) it would be impossible to achieve complete

depth of focus. With such conditions, it is better, we think, to let those parts which cannot be satisfactorily focussed go entirely out of focus as Mr. Bond has done in this case. If an attempt is made to compromise, that is to obtain as much depth of focus as possible, the result is usually unsatisfactory because the partially focussed parts appear as weird excrescences which catch the eye in annoying fashion.

Data: $2\frac{1}{4} \times 3\frac{1}{4}$ " Graflex; 7" Kodak Anastigmat; exposure by one photoflash at F:11, on Agfa S. S. Pan., in D-76; 10×12 " print on Agfa Brovira Kashmir, in D-72. Prints may be obtained at the price of \$10.00 upon application to Camera Craft. Prints will be exchanged with other prize winners in these competitions only.

Fifth Award Advanced Class

■ This print has a lovely atmospheric quality and brings us a soothing impression of the peace and quiet of the country-side. It seems to us that the picture is lacking in movement of line, by which we mean that the eye is not led through the picture in easy and orderly fashion. It moves directly to the distant steeple along the plowed furrows, and this single movement is so strong that the eye gets away from it only with an effort. Obviously the solution of this difficulty must come through the selection of the camera position. If the camera had been placed much further to the left, the steeple could then be placed much more to the left in the picture space. If the lean-to in the foreground were kept in approximately its present position, the lines of the furrows would then run between the two points of interest in a diagonal direction. We can see by visualizing such a set-up that by spacing the two points of interest further apart and by connecting them with diagonal lines, instead of lines running directly down the center, we create a situation in which the eye has much more freedom of movement than at present.

Data: 6 x 6 cm. Rolleiflex; F:3.5 Zeiss Tessar; 1/100 sec. at F:4.5, on Agfa Isopan, in Perutz developer; light yellow filter; Agfa Brovira in M. Q.; diffused through Duto #1 diffusion screen. $11\frac{1}{2} \times 12$ " prints may be obtained at the price of \$5.00 upon application to Camera Craft.



"On the Field"

Ante Kornic
Ljubljana, Yugoslavia



*C. T. Townsend
San Francisco, Calif.*

Amateur Medal Print

■ Mr. Townsend has carried out a rather difficult project with good technique and a sound feeling for spacing. Observe how the tilting of the axis of the face helps to create movement within the picture space. A crowded shot such as this looks intolerably cramped and static unless some such device is utilized. The technical data includes a statement that the camera was placed 12 inches from the face. Under such circumstances it is truly remarkable to see how little distortion is apparent in the nose.

Data: $2\frac{1}{4} \times 2\frac{1}{4}$ " Primaflex; 3" focal length lens; 1 sec. at F:22, on Agfa Finopan in DK-76; 8 x 10" print on E. K., P.M.C. #11.

*"Little Old Lady"*

*Morgan W. Wickersham
Washington, D. C.*

■ This we consider an excellent piece of portraiture. It is thoroughly realistic without being so harsh as to place emphasis on detail rather than on the subject as a whole. Expression and pose are excellent. For the most part it is the combination of these two elements that largely determines whether a portrait may be pictorially effective. The difficult thing for the photographer to avoid is what we might call the intrusion of the personal identity. By that we mean that when that happens all one can see in the picture is Mary Jones or Joe Doakes having his or her picture taken. On the other hand a really successful pictorial portrait, such as this, has a universal quality. We see here the kindness, and dignity of age. The personal identity of the subject does not force itself on our attention. We do not think it is possible for anyone to tell or teach a photographer how to accomplish what Mr. Wickersham has achieved here. Such success must come from perception and understanding on the part of the photographer himself, and these are the result of intelligent study,

observation and practice.

Data: Leica; 90 mm. Thambar; $\frac{1}{8}$ th sec. at F:6.3, on Agfa Finopan in D-76; lighting by photofloods; 11 x 14" print on E. K. Opal W. Prints may be obtained at the price of \$5.00 upon application to Camera Craft. Prints will be exchanged with other prize winners in these competitions only.

Third Award

Amateur Class

■ Here again as in the case of the first prize print we notice the advantage of placing the head so that the axis of the face runs diagonally through the print. Our one disappointment in this picture has to do with the inclusion of the pipe stem in the lower right. There are two reasons for this. In the first place it creates a line which has a tendency to carry the eye out of the picture. In the second place the pipe stem does not readily explain itself, with so little of it shown, so that it now functions more as a rather distracting spot than as a component part of the picture.

Data: $3\frac{1}{4}$ x $4\frac{1}{4}$ " Graflex; Zeiss Tessar lens; $\frac{1}{30}$ sec. at F:6.3, on E. K. Panatomic in D-76. Velour Black DL, in D-72; print size 8 x 10".

*"A Brown Study"*

*Fred Herrington
San Francisco, Calif.*

Fourth Award
Amateur Class

■ This picture contains an interesting and graceful leading line, and a lovely play of light over the water. We think it is a mistake to include the horizon line for three reasons. First, compositionally speaking this line has no connection with the rest of the picture. That is it does not tie in with the rest of the material in any way and it is not necessary to the completeness of the picture. Second, it is not a pleasing line and it sets up a rigid rectangular strip at the top that is out of keeping with the sweeping curves that constitute the principal theme. Third, it brings about the inclusion of the large strong highlight that appears in the center of the print at the horizon line, and this highlight tends to pull the eye to the top of the print and away from the more interesting material. Consequently we feel that the picture is greatly improved if trimmed from the top until the horizon line is entirely eliminated.

Data: $3\frac{1}{4} \times 4\frac{1}{4}$ " Graflex; 1/100 sec. at F:16, on E. K. Panchro Press with K-1 filter; developed in DK-50; $10\frac{1}{2} \times 13$ " print on E. K. P.M.C. #11.



"Line of Beauty"

R. B. Ericsson
Arcadia, Calif.



"Ming Headpiece"
Philip Griffith
Quetta, India

Fifth Award

Amateur Class

■ Here we find very interesting subject matter, a fine handling of outdoor lighting, and excellent technique. The one shortcoming of the picture is the disturbing quality of the background. The line which runs horizontally through the head, and the diagonal lines in the upper right are all distracting and the picture would be much better without them. Observe that the abrupt change of tone in the background creates a peculiar optical illusion. The head appears to be placed rather low in the picture space, though in actuality the eyes are a good two inches above the center. Because of this we would trim the print quite close to the head at the top.

Data: Contax; Zeiss Tessar F:2; exposure by Weston reading; on Agfa Finopan; 9 x 12" print on Agfa Brovira.

Monthly Competitions

Contributors Please Notice

The steadily increasing circulation of Camera Craft makes it imperative that we allow our printers more time in which to produce the magazine. The date for judging these competitions each month must therefore be advanced. Beginning October 1st the competitions will be judged on the first day of each month instead of on the fifth day as has been our practice in the past. PLEASE REMEMBER TO SHIP YOUR PRINTS FIVE DAYS EARLIER THAN BEFORE. JUDGING ON THE FIRST DAY OF EACH MONTH.

Scoring for Club Trophy Cups

The following won points for their clubs in the Advanced Class: S. S. Smith, for The Camera Clique; Dr. Max Thorek, for the Fort Dearborn Camera Club; Slavko Smolej and Ante Kornic, for the Fotoklub Ljubljana; and Herbert P. Bond, for the Lost Angeles Camera Club.

The following won points for their clubs in the Amateur Class: Fred Herrington, for the E.P.I.C. Pool of San Francisco; and Morgan W. Wickersham, for the Washington Pictorialists.

The following prize winners have no club affiliations: C. T. Townsend, R. B. Ericsson and Philip Griffith.

Contributing Clubs

Aluminum Camera Club (New Kensington, Pa.)	Humboldt Camera Guild (Calif.)
Camera Art Circle (Poona, India)	Los Angeles Camera Club
Camera Art Group (Bombay, India)	Oregon Camera Club (Portland, Ore.)
Camera Clique (St. Louis, Mo.)	Photographic Society of San Francisco
Camera Club of Long Beach (Calif.)	San Jose Camera Club (Calif.)
E.P.I.C. Pool of San Francisco	St. Louis Camera Club (Mo.)
Fort Dearborn Camera Club	Washington Pictorialists (D. C.)
Fotoklub Ljubljana (Yugoslavia)	West Suburban Camera Club (La Grange, Ill.)

STANDING OF CLUBS

Large Clubs Advanced Class

Fort Dearborn Camera Club.....	34
Fotoklub Ljubljana	33
Los Angeles Camera Club.....	18
Photographic Society of San Francisco	11
Fotoklub Zagreb	4
Miniature Camera Club of New York....	2

Small Clubs Advanced Class

The Camera Clique.....	23
Baltimore Camera Club.....	6
The Pack Rats.....	2
East Bay Camera Club.....	1
Washington Pictorialists	1

Large Clubs Amateur Class

Los Angeles Camera Club.....	4
Golden Gate Miniature Camera Club.....	4
Photographic Society of San Francisco	4
Miniature Camera Club of Oakland.....	3

Small Clubs Amateur Class

E.P.I.C. Pool	21
Washington Pictorialists	11
Riverside Camera Club.....	9
Aluminum Camera Club.....	8
Oklahoma Camera Club.....	7
St. Louis Camera Club.....	7
Camera Club of Richmond.....	5
Kamera Kranks	5
Nassau County Camera Club.....	5
Norfolk Photographic Club.....	5
Taft Camera Club.....	5
Crockett Photographic Society.....	2
San Jose Camera Club.....	1

Club Notes

Apologies to Mr. Halliday

On page 448 of the September issue of *Camera Craft* there appeared a communication bearing the heading "Why Do We Send Prints To Salons? A Reply To Mr. Bristol." Unfortunately, due to a printer's error, this letter appeared unsigned. We hasten to inform our readers that no such anonymity was intended. The letter was received from Mr. Frank A. Halliday, of Calgary, Canada, who ranks among the foremost pictorial photographers of his country.

Eastman Kodak Company Offers New Service to Camera Clubs

As a result of the marked increase in camera clubs and other photographic organizations with the subsequent requests for advice on photographic subjects, the Eastman Kodak Company has announced the Camera Club Photographic Service.

As a part of this service, a series of bulletins and illustrated lectures have been prepared specifically for use by existing active camera clubs and newly-formed clubs with serious intent. This material is now available on request and without charge. Additional material will be supplied from time to time.

The bulletins deal in general with the formation of camera clubs and in particular with the various activities that contribute to their success as live organizations.

The lectures, covering a variety of photographic subjects, are illustrated with lantern slides and in some cases with 16 mm. motion pictures. The slides are 50x50 mm. size, and are black and white or natural color (Kodachrome), depending upon the subject matter of the lecture they illustrate.

The titles of available bulletins are:

1. How to Organize a Camera Club
2. A Model Constitution and By-Laws; also, A Simplified Constitution and By-Laws
3. Club Rooms, Furnishings, and Equipment

4. Cost Considerations in Forming and Maintaining a Camera Club
5. Darkroom Plans and Equipment
6. Camera Club Activities and Other Means of Keeping a Club Alive
7. Camera Club Rules and Regulations
8. Camera Club Programs and Program Material
9. The Camera Club Library
10. Monthly Print Competitions and Discussions of Prints
11. Monthly Print Exhibits
12. Members' Yearly Exhibition
13. Camera Club Permanent Print Collection
14. How to Conduct a Course in Photography
15. Camera Hikes and Outings

Available lectures are:

1. "Seeing Things for Keeps," by Wyatt Brummitt
2. "The Essentials of Picture Making," by W. F. Bent
3. "Snap That Picture," by Dr. E. P. Wightman, F. R. P. S.
4. "Night Photography," by W. F. Bent
5. "Photography in Colors," by Dr. Walter Clark, F. R. P. S.
6. "Photography With a Miniature Camera," by Herbert Johnson
7. "Photographic Pictorialism," by Dr. E. P. Wightman, F. R. P. S.
8. "Personal Photography," by Wyatt Brummitt
9. "The Kodachrome Process," by Dr. E. P. Wightman, F. R. P. S.
10. "Photography by Polarized Light," by John W. McFarlane
11. "Color Printing by the Eastman Wash-off Relief Process," by John McMaster

Further details regarding this service may be obtained by writing to Camera Club Photographic Service, Eastman Kodak Company, Rochester, New York.

The Convention of the Photographic Society of America

The Third Annual Convention of the Photographic Society of America will be

held October 9th and 10th, at the Blackstone Hotel, Chicago, Ill.

An outstanding group of speakers includes: Mr. Ira W. Martin, who will talk on "Juries and Salons"; Mr. Rowland Potter, whose subject will be the delights and profits accruing to the technical worker; Mr. Frank Liuni will discuss "The Problem of Organizing the Amateur Photographer"; Mr. Hillary G. Bailey will discourse on the theme "Photography Marches On"; Mr. Fenwick G. Small will talk on the use of the miniature camera in industrial and scientific photography; Mr. Harry Shigeta will discuss the interesting topic of "Pictorialism in Commercial Photography"; Dr. David Craig will submit a report on "The Four Print Plan"; and Mr.

Will Abbott Kelley, president of the Chicago Camera Club, will make the address of welcome at the dinner on October 9th.

A special feature of this year's convention is the donation of prints by prominent photographers that are to be awarded to those attending the convention. Mr. Edward Alenius, Mr. Frank Fraprie, and Dr. Max Thorek are each donating a print to be given to the club with the largest attendance from outside of Chicago. Mr. Adolf Fassbender and Mr. Dever Timmons are also donating prints to be awarded to individuals attending.

Many other interesting and instructive activities and events will take place at this convention and every photographer should make every effort to attend.

Notes and Comments

Explanation

In our August issue this department described a reflex focusing accessory developed by Hugo Meyer & Co. for the Cine Kodak Special and in doing so created an erroneous impression regarding its function.

The Cine Kodak Special has a reflex focusing device built into the camera and the Hugo Meyer accessory conveys the image from this device through a tube containing an optical system so that it may be viewed from the back of the camera.

The Eastman Kodak Co. supplies a similar device called the Reflex Finder Image Magnifier, which, as the name implies, merely magnifies the image shown in the reflex finder. This device can be used with the 100-foot film chambers only and the Hugo Meyer accessory has been developed to serve the same purpose when the 200-foot film chambers are used.

Our apologies to both manufacturers for our failure to describe this development accurately.

Camera Insurance

Photographers seldom stop to count the value of their cameras and equipment, for their enthusiasm for their chosen hobby or profession minimizes this investment.

However, a lightly equipped amateur may easily be carrying more than one hundred dollars in equipment, on a day's outing, and more expensive outfits are the rule rather than the exception.

One does not like to dwell on possible loss or damage to this costly equipment, but that such losses occur is only too well known. Cameras and equipment are small and have a definite value and they are also subjected to many dangers as a picture hunter pursues his quarry.

Though all photographers know these things, many do not know that insurance against these risks may be had inexpensively. The American Insurance Co. offers complete coverage on cameras and equipment and will gladly quote you rates if you will write stating the value of your equipment. Address the American Insurance Co., 13 Washington St., Newark, N. J.

Judges Announced in Medo Contest

The Medo Photo Supply Corporation has appointed the following famous photographers as judges in their \$1000 Prize Contest: Mr. Adolf Fassbender, F. R. P. S.; Mr. William H. Zerbe, A. R. P. S.; and Mr. Chester Kohn, F. R. P. S. The reputation of these men as both photographers and judges of unusual merit is well known in photographic circles.

Closing date is October 15th, so mail your entries at once to the Medo Supply Corp., 15 West 47th St., New York City.

Chandler Trimmers

The Chandler Mfg. Co. offers fine all-steel trimmers at prices that will suit the most modest purse. Either deckle or straight trimmers may be had in two sizes, 6- and 10-inch. Their sturdy all-steel construction makes them dependable and of lasting service. You can see the Chandler Trimmers at your dealer's store or complete details may be had from Chandler Mfg. Co., Ayers, Mass.

Mendelsohn Speedgun for Exakta Camera

The Model "G" Mendelsohn Speedgun has been supplied as a flashbulb synchronizing unit for the Exakta camera for several years, contrary to a statement recently made in this department of Camera Craft. However, this device was unsatisfactory until the advent of the wire-filled bulb, and for that reason the manufacturers did not give it extensive publicity. Now, any standard model in the Speedgun line may be adapted, with complete satisfaction, at the cost of \$4.25. For further details write S. Mendelsohn, 202 East 44th St., New York City.

DuBois School of Practical Photography

The DuBois School of Practical Photography offers instruction in all branches of photography for either amateurs or professionals. The school features individual training which enables the student to proceed as fast as his capabilities permit. Moderate fees are charged for all instruction. For further details write the DuBois School of Practical Photography, Room 714 Hearst Bldg., San Francisco, Calif.

The Amateur Set of Peerless Water Colors

Due to the demand for a small trial set of Peerless Water Colors, the Peerless Color Laboratories announce their new Amateur Set, available at the amazingly low price of 25 cents. Peerless Water Colors have long been famous for their fine quality, and the new Amateur Set is available from your dealer or the Peerless Color Laboratories, Rochester, N. Y.

A. Ellis Smith Opens Camera Shop in Hollywood

A new photographic store, A. Ellis Smith's Camera Shoppe, was recently opened in Hollywood, Calif., at 6527 Hollywood Blvd. The store will offer complete photographic service in both the motion picture and still fields. Mr. Smith's twenty years of practical photographic experience will prove invaluable to his customers and you will find that his advice and assistance is yours for the asking.

DuPont Now Making Daylight Loading Spools for Robots

The DuPont people believe so strongly in the future of the Robot Camera in the United States that they are now making and selling daylight loading spools for use in that amazing little camera that takes sequence shots with machine-gun speed.

Aggressive dealers are urged to make a note of this new item and to stock it without delay. The constantly increasing sales of Robot cameras will mean a proportionate increase in demand for Robot spools. And the superb quality of DuPont film is too well known to require further explanation here.

Intercontinental Marketing Corp., sole U. S. agents for the Robot camera, are launching a new and greatly enlarged advertising program which will include the use of many big national magazines as well as the photographic publications.

Omag Filters

The Omag, famous Swiss Optical Glass Filters, are distributed in Canada by George Noble, Banff, Alta., Canada. Omags are made of fused optical flats and consequently guarantee the user a high standard of accuracy and long service. Prices will be supplied upon request and the sizes and colors desired should be given to prevent delay. For further details on Omag Filters write George Noble, Banff, Alta., Canada, sole Canadian distributor.

Transparent Print-In Screens

The United Photographic Supplies Co. offers a complete line of print-in screens for use as backgrounds, textures, decora-

tive designs and diffusions. The screens are placed between the negative and paper, giving an over-tone of fine criss-cross markings. A large number of textures are available in sizes from $2\frac{1}{4} \times 3\frac{1}{4}$ inches to 9×12 inches at inexpensive prices. The screens are non-inflammable and any sketching or drawing may be done on their surfaces without damage and afterwards easily removed by washing, leaving the screen unharmed.

For further details write United Photographic Supplies Co., 5 Beekman St., New York City.

New Model "AF" Argus

A new model "AF" featuring a precision focusing mount has been added to the Argus candid camera line, according to an announcement by the International Research Corporation, manufacturer of the Argus camera.

The new mount makes it possible to obtain critical focusing from infinity to 15 inches with perfect ease and simplicity. It is unnecessary to use supplementary portrait or copying lenses.

The Model "AF" is identical in specifications to the original Argus Model "A," which is continued without change. Model "AF" is priced at \$15; Model "A" at \$12.50.

The new focusing model is designed so that complete folding position of the lens is possible, and it may be used in the present Argus carrying case, or with the Model "E" Argus Enlarger without further accessories or change.

The company also announces a new red filter for use with infra-red film, priced at \$1.50. Also new to the Argus line is the "Redycase," a deep-grained cowhide carrying case. A snap of the button drops the entire front ready for action. The case is fitted with a detachable silk neck cord. The price is \$2.75.

The New "Swing-Head" for Tripods

Elwood Ingledue, candid cameraman long associated with trade journals on the Pacific Coast, has developed a tripod head with three movements that will greatly increase the facility of your picture taking.

The New "Swing-Head" has an additional third movement: it "pans," tilts, as do

other heads, but it also swings from horizontal to vertical through a 90° arc. "Panning" and tilting movements are controlled by the steering handle, which locks in any position, and at the touch of a button your camera can swing from the horizontal to vertical position, without losing focus or direction.

Every "Swing-Head" is supplied with three special legs for table-top use. Developed for minicams, the "Swing-Head" is also ideal for motion picture cameras. Quick and easy to operate, the "Swing-Head" is durably manufactured, being of all-metal construction, chromium plated. The price of \$8.75, includes the special legs for table use.

See it at your dealer's or write for descriptive material from The Ingledue Co., 709 East Broadway, Glendale, Calif.

S. E. V. Tri-Purpose Projector

The S. E. V. Tri-Purpose Projector will take single frame strips, double frame strips and frames mounted in glass. It's really three projectors in one. Designed especially for users of minicams, the S. E. V. Projectors will throw your pictures on the screen life-size, and is ideal for the projection of your color film. You can see the S. E. V. Tri-Purpose Projector at your dealer's or write for a descriptive folder to the Society for Visual Education, Inc., 327 S. LaSalle St., Chicago, Ill.

The Laborant Enlarger

This new enlarger of Czechoslovakian manufacture emphasizes optical perfection, stability and durability. Among its outstanding features, the Laborant Enlarger lists: all aluminum construction, a double condenser lens system; a swivel tripod that permits floor or wall projection; counter-balanced support; and an unsymmetric, uncemented Benar four element lens designed to provide a perfectly flat field of illumination with any negative.

The Laborant will take negatives up to $3\frac{1}{4} \times 4\frac{1}{4}$ inches or 9×12 cm., and smaller models are available for $2\frac{1}{4} \times 3\frac{1}{4}$ or miniature negatives.

See it demonstrated at your dealer's or write for further details from the Chess-United Co., Mohawk Bldg., Fifth Ave. at 21st St., New York City.

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CAMERA CRAFT



"Krieger Im Helm"

Rudolf Koppitz

(See Notes and Comments)

November 1937		PRICE 25c
THE SEASON'S GREETINGS	Fred R. Archer	
CURIOSES AS TEACHERS	William S. Davis	
ABOUT ULTRA-VIOLET LIGHT	Theodore Z. Herz	



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1st San Francisco International Invitational Salon

W. J. Roberts

The Season's Greetings

Fred R. Archer

FOR a great many years Rosamond and I have made our own greeting cards . . . the editor of Camera Craft has been on our mailing list . . . the editor asked us to explain how we made them . . . we demurred . . . the editor insisted . . . we didn't wish to cross him off our list . . . So, here goes. . . .

We make our own cards because we feel that it gives us a chance to send our friends a more intimate and individual greeting, and not because we think that we are saving money. Counting time and materials, one does not save a thing; more often the expense is greater than the amount for which one could purchase the standard brands . . . but we enjoy making them and our friends seem to enjoy receiving them.

First . . . the idea . . . The idea is the main thing necessary for a good greeting card; without the idea there is nothing towards which to work. Given the idea, the next thing to do is to determine what method one must pursue to do the job.

Of course, the simplest thing for a photographer to do is to take a print from a chosen negative and tip this with glue to a card on which has been printed the wording of the greeting. Anyone can do this so we will waste no more time explaining it. While we are talking about simple ways . . . let us try one that is the essence of simplicity . . . Suppose we want to send a greeting reading "Just a line to wish you so and so".....line.....an idea, a single line wandering over the page and spelling out our greeting.

There is no need of a negative for this one, as we will use just a plain line that can be drawn on tracing paper or tracing cloth . . . and make our prints from that.

Now, let's start. . . . First, determine the size of the finished card. If it is to be sent in an envelope, it would be wise to purchase the envelope first as envelopes come in various sizes . . . and one must work to this size so that the cards will fit. A good fit tends toward neatness.

The size determined, we take a piece of architect's tracing cloth, a ball-pointed (or otherwise free flowing) pen, a bottle of India Ink, a piece of paper, a pencil . . . and we are ready to begin.

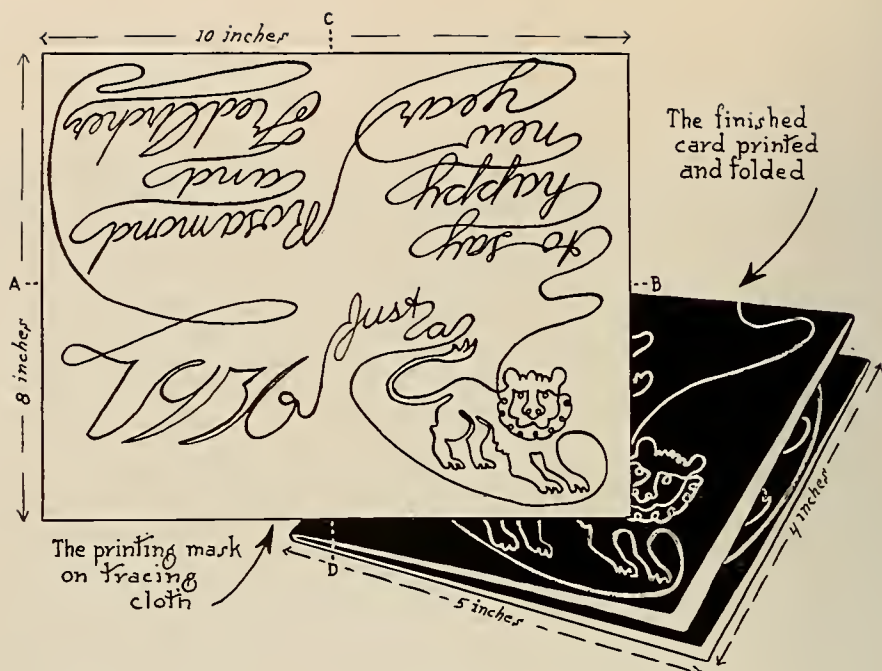


Figure 1

On the paper, we mark off four adjacent squares, and with the pencil draw our line . . . taking into consideration that we are going to fold the paper horizontally along the line A B . . . and then vertically along the line C D. This makes the lower right hand square the first page, the upper right, the second, the upper left, the third and the lower left, the back of our finished folder; so we must draw our line accordingly. Figure 1.

Now if we use a plain line there is no novelty . . . line? . . . Lion . . . Ah Ha! Another idea! Why not draw a picture of a lion and substitute it for the word line? In these days of cross word puzzles, cigarette-guessing contests for fabulous sums (which if you win, the Government gets half) one should be able to get away with an idea like that. Artists have been drawing pictures with single lines for years. The idea is not new or original. Somewhere, I have seen animals done this way.

O.K. We draw our line on the paper and connect it up where we started and there we are. . . The lion? . . . Oh, yes! . . . Well, maybe it does look like a cat . . . we can't all be artists, but most of our puzzle-working friends will get the idea.

We have drawn this with pencil on paper in order that we might erase and change when necessary. Now we trace this onto the tracing cloth or paper with good black india ink and we are ready to print the cards. Using this as a mask, or negative, we merely print by contact on contrast photographic paper the number we need.

In printing, the tracing paper is placed in the frame or on the printer face down as we have made our design right side around. . . . If we were



Figure 2



Figure 5

using a thick substance to work on, it would be necessary to do our work backwards in order that we could place it in direct contact with the emulsion side of the paper and thus insure clearness. Single weight paper will fold easier and if we fold while the paper is still damp it will fold without cracking. Heavy papers will fold better if some blunt, hard edge is drawn across the back on the folding line to score it.

Another simple idea, Fig. 2, is to use cut-out wooden letters which may be purchased at the dime store for a cent a letter, and set them on a large card, spelling out the wording you wish. Arrange your light so as to cast the shadows you want, and photograph the ensemble (pronounced for radio purposes without the l-e).

It might be necessary to use a reflector high in the front to separate the face of the letters from the shadows. This reflector should be a soft one so as not to throw a false shadow back towards the source of light.

The negative thus produced is printed on double weight paper, toned if desired, and put into envelopes for mailing . . . or mailed as a post card if so desired.

A calendar card such as Fig. 3, is one way of being remembered throughout the year or of inflicting yourself upon your friends all year . . . merely a matter of how you look at it, or should we say, how they look at it; they might keep it for the service of the calendar providing it is made in a handy pocket size.

This one was made by lettering with white water color or poster paint on a piece of Chinese silver spattered paper (consult your gift stores for fancy wrappings) and glueing calendar pad pages to it. A brass radiator ornament was placed in front of this paper and a photograph made of the ense . . . the whole. Many little objects found in the novelty stores will lend themselves to this type of card.

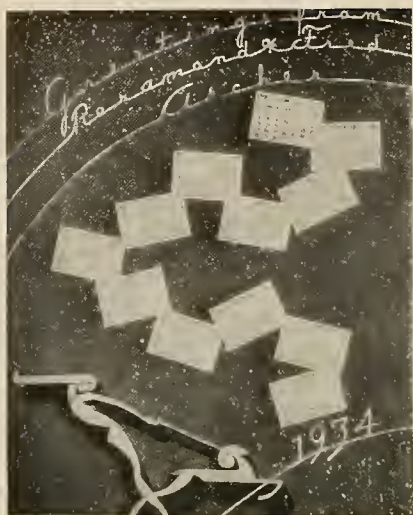


Figure 3



Figure 4

Everyone has looked into a Christmas tree ball and seen those beautiful likenesses of oneself that look back at you. . . . One of these silver balls, a pencil and paper, an aptitude for drawing and a great cartoonist could be started on a career.

Well, anyway, we had an idea. Standing before one of these little prevaricators, placing our lights behind and to the side of the ball, with the camera behind us, shooting between our heads (that little box on Rosamond's shoulder is it) the negative was made. The lettering was painted with opaque paint on the shiny side or back of the negative, to avoid having to print backwards on the emulsion side, and the cards printed on silver metallic paper such as is imported from Europe and costs too much. Fig. 4.

Now here is a tip. If you use an idea like this don't send it to anyone who hasn't seen you lately, or have some good portraits made and send them along. (That's an idea, and I am sure the portrait photographers will be glad of the business.) For if you don't, . . . Here's what actually happened. . . .

One of these cards arrived in due time at the home of a couple of Rosamond's maiden aunts in Canada. . . . Now they had never seen either Rosamond or myself. . . . 'Nuff said? . . . Well, we'll (what a difference that little apostrophe makes) finish anyway. Sometime later, Rosamond's sister received a letter from the aunts and carefully inserted in the contents was "Do they really look like that?" . . . Ho, hum!

We usually send out our greeting cards for New Years as we feel that we have a broader scope, and if we wish to have a humorous one we can do so. One has to keep in mind the fact that a great many people on the receiving end feel that Christmas being a sacred day, a sedate card is more appropriate.

Card number 5 was made with a wide angle lens . . . our hands being stretched towards the camera, hence the distortion (no, really, our hands



Figure 6



Figure 8

are not that large) of the great big hand shake. The letters are lettered on film with opaque, and it is ready for printing. Opaque, by the way, for those who do not know, is a red paint made for blocking out or masking parts of the negative. It can be purchased from any photographic dealer.

Now we come to a more sedate card, Fig. 6. The Madonna idea. The star was painted on a canvas background and a little cradle was made of wood. The model was draped in shiny white cloth with a piece of gray cloth for accent and photographed against the background. A mask of cardboard was cut out for the black frame and the columns. This was placed in the camera upside down (in the camera the image is formed in this position) as near the film holder as possible and left in for the exposure. This blocks off the light rays to that area and leaves it transparent to later print black. This card was made on an 8 x 10 film and mailed out in that size. Most of the other cards were 4 x 5 or $3\frac{1}{4} \times 4\frac{1}{4}$ size.

The Spanish "Happy New Year" card (No. 7) was made by posing the young Senorita (young lady to you) on a balcony railing which was brought into the studio and propped up on a platform. A low viewpoint was taken to give height and an inside mask was used for the arch. The lamps were later double exposed on the film and the lettering opaqued on the finished negative.

When the prints were finished they were toned to a warm black and the confetti was spattered into the upper left and lower right hand corners to help with the festival idea. This was done by dipping a toothbrush lightly to some poster paint and then drawing the brush over a small piece of window screen. This spattered the small globules of paint onto the print. Red, yellow and blue colors were spattered on giving a lot more life to the finished card. This was also sent out in 8 x 10 size.

The 1937 card (Fig. 8) was the result of finding these little pipe stem cleaner figures in the dime store. They were arranged on a small circular

blue mirror, a white card was bent around in back and a piece of clear cellophane was draped like curtain folds before this card. A spot light high from the right of the camera was used to illuminate the musicians and the mirror. The shadows and light pattern on the background is the resultant reflection from the mirror. The lettering again was done with opaque on the negative with the exception of the vanishing 6 which was done with New Coccine, a red dye that can be put on to any density with water and a brush . . . a very handy addition to any photo kit.

From all this rambling the reader will probably gather that we have a lot of fun making our greeting cards. . . . We do . . . and it is a relaxation from all our other work. It is with a hope that these methods will help you towards the pleasure of making your own greeting cards that this is written and we send



Figure 9

P.S. A pipe stem cleaner figure (he was the orchestra leader before), a "birdie" drawn with ink on a thin card and cut out, and a camera . . . what a camera! Alternate layers of light and dark gray cardboard, a small piece of doweling for a lens, black thread and a bead for the bulb and tubing, toothpicks glued to a circular piece of cardboard for a tripod, a piece of quarter inch wooden doweling inserted into a faucet washer for the spot light stand. Into this piece of doweling has been inserted one of those little wooden gadgets the nurse uses to put cotton on to swab out your throat (Ugh, nearly strangles one) on top of which is half of a hose washer holding one of Rosamond's thimbles. A card placed flat on the table and bent up to form a background is responsible for the curving lines made by the edge of the spotlight on the background. So there you are, Mr. Editor. . . . There you are!



Figure 7

Figurines As Teachers

William S. Davis

Part I

ONE does not usually look upon inanimate objects as playing the role of teacher, yet, considering the matter in its broadest aspect, anything which affords a means of adding to one's store of knowledge may be thus regarded. So, figurines may, when properly used, prove to be teachers, since through them the student can learn much concerning various problems encountered in general picture-making as well as those particularly associated with the human figure as a subject.

To the beginner trying to grasp the principles of pictorial and photographic technique, the employment of figurines offers certain advantages over living models, particularly when the latter are likely to be acquaintances or relatives who lack understanding of the purpose in view and are interested only in seeing produced complimentary likenesses of themselves. For a figurine is never restless nor hard to please, and cannot "talk back" when the photograph happens to be considerably less than perfect! And the knowledge of elementary matters gained in utilizing such models for study purposes will do much to prepare the student to deal successfully with living figures by leaving the mind more free to concentrate upon the special problems of posing, personality of the sitter, etc. necessarily encountered when working from life.

A few well chosen figurines will provide the means for a great variety of experiments, both technical and pictorial in character. Casts of excellent quality are to be had at art shops in all the larger cities, or may be ordered by catalogue from several firms specializing in the production of plaster casts in various sizes from antique and modern sculpture. Prices for the smaller casts are moderate, around three dollars being a fair average for a figurine about 12 inches in height, though necessarily the amount charged will vary somewhat because based upon the difficulty involved in the casting process, some attitudes requiring more complicated moulds than others. Usually, no extra charge is made for the ivory tone finish, which is decidedly preferable to harsh white plaster, especially for photographic purposes.



"For Want of Knowledge"

Wm. H. Lathrop

National Salon of Photography

In making a selection one would do well to consider securing figures in different attitudes, both nude and draped. However, a single good cast will serve a number of purposes, and others may then be acquired in accordance with personal desires. Excellent among the small figures available are those known as Tanagra figurines, which derive their name from the site in Asia Minor where the original terra-cotta figures, dating back several thousand years, were unearthed by archaeologists. A student especially interested in the study of lighting effects upon faces would do well to get a cast of a good head and bust. One no more than a quarter or third life-size will serve the purpose if the features are strongly modelled.

In addition to the cast, or casts, backgrounds are required, sheets of plain mounting stock about 22 x 28 in size being both cheap and convenient. White, black, and several shades of gray or drab afford an adequate range. Any small stand or box of convenient height that can easily be moved about answers the purposes of a "model stand."

While much can be learned by visual observation alone regarding such matters as lighting and varied viewpoints, nevertheless, to fix most firmly in mind the lessons that a figurine can teach it is advisable to make photographic studies in series covering the problems considered. This, of course, necessitates employing a focusing type of camera, as in any other form of work from near objects, and it is advantageous to be able to observe the lens-image on a focusing-screen.

With these introductory remarks concluded, and the assumption made that an interval has elapsed during which any interested reader has had time to become "all set" for making experiments, with a figurine as the teacher, we will take for the first theme one of basic value, namely:

Lighting

Everyone knows that variations in the character of the lighting alter the aspect of objects, but the value of making a systematic series of observations lies in finding out *how particular effects are produced*, so they can later be brought about as desired where the lighting is under control.

Now, in studying the action of a single source of light upon an object the factors that should be kept in mind are: direction from which the light comes; intensity or force of the light, and, lastly, its degree of concentration—i. e. whether emanating from a very small source or a large area.

Direction determines the arrangement or distribution of light and shadow in the object illuminated. *Intensity* controls the range of contrast between the areas in light and shadow, respectively. *Concentration* of the light-source has a pronounced bearing upon the abruptness of transition from one tone to another over surfaces possessing rounded contours, such as a figure, and the sharpness of outline of cast-shadows.

The four photographs herewith presented serve to bring out the basic principles just enumerated, although a student might well go on by making a number of additional studies covering more angles of lighting and types of illumination. The model chosen for our illustrations was a little lady of Tanagra—an ivory toned figurine 10½ inches in height, and the model stand was draped with a soft textured crimson fabric.

In making the study designated Number 1, the model was placed in



Figure 1



Figure 2

full sunshine two feet from a window so screened as to leave a narrow vertical aperture 14 inches in width, light from other sources being excluded. The effect of intense, concentrated illumination is seen not alone in the whiteness of the parts in full sunlight and the depth of the shadowed portions, but also in the scarcity of intermediate gradations, which cause a sudden jump in transition from light to dark areas. The sharpness of this transition is particularly noticeable in the arms, which in places appear to consist of sharp-edged planes set at varying angles to one another, rather than softly rounded forms.

Number 2 shows the effect of soft side lighting from a large oblong window facing North, and sufficiently raised from the floor to allow the light to fall at an angle of approximately 45 degrees with the model placed four feet from the wall. As the model stood opposite the end of the window furthest away, and the camera was pointed in a direction parallel with the wall, the light had a chance to reach around to some extent in front of the figure, thus building up a series of intermediate tone gradations which greatly help to define the surface contours. While the angle of illumination is essentially the same as in Number 1, one has only to compare the two renderings to see the marked difference between them, Number 2 showing not only a decided reduction in total contrast, but more gradation in both light tones and shadows in addition to gradations between, all of which increase the fullness of the modelling throughout.

Number 3 is a typical *contre jour* treatment, known variously as "against the light effect," "back lighting," and "line lighting," obtained by placing the model between the camera and source of light. In this instance



Figure 3



Figure 4

the lower portion of a sunlit window two feet wide and two feet back of the figurine was blocked out by the sheet of dark gray mounting-bristol which served as background, while the area above was covered with one layer of thin white "cheese-cloth" to soften the intensity of the strong sunlight. As can be seen by the direction of the cast-shadow on the stand, the lens was pointed diagonally toward, instead of straight at, the window, this being done to emphasize the line of light on one side of the drapery and arms. While direct illumination of the front of the figure from other windows was excluded, the effect of diffused lighting in the shadows is in evidence; the covering of the stand (even though crimson in color) refracting sufficient sunlight to soften the shadows.

Number 4 brings us to the opposite extreme of lighting shown in the preceding study—in this case flat lighting full upon the figurine, the latter standing in a position to face directly the studio North light nine feet away. The slight shadows visible in such parts as the chin and under sides of the arms are due to the source of light being somewhat higher than the figure.

All four studies were made with the same equipment—a 4 x 5 view camera and lens of 7½-inch focus—on ortho. non-halation plates, and the prints by contact on No. 2 grade Azo paper to avoid as far as practicable any differences due to photographic manipulations. The exposure of Number 1 had to be cut down however to compensate for the great difference in general power of the light, 1 second being given at $f/16$, while Numbers 3 and 4 received 8 seconds at the same aperture. Number 2 had the same relative exposure as the two last named; 2 seconds at $f/8$, but the larger stop was employed in this instance because it appeared to bring out better the quality of the line lighting around the figure.

A somewhat interesting difference exists in the tonal rendition of the crimson stand-covering in the four photographs, due to differences in the lighting.

All the lightings illustrated, as well as many others, can equally well be produced by artificial illuminants. A single unscreened electric bulb of reasonable power will produce the maximum effect of concentrated and intense direct lighting. Interposing a diffusing screen of some thin material at varying distances gives different degrees of softness in illumination. For still broader lighting effects a muslin screen as large as an ordinary window can be illuminated from the back by several bulbs well spread out. Informative experiments in multiple lighting may be conducted by using two or more sources of light coming from different directions, and the action of white opaque reflectors so placed as to project some light into the shadows may well be studied.

The object of making all such observations is not to discover the one best lighting—for that, *per se*, does not exist—but rather to teach the noting of countless effects, and how they are produced, with a view to learning which is likely to be most effective under given circumstances.

This is the first of a series of articles in which Mr. Davis will show how a still life subject may be used to practice and master the fundamental photographic techniques.—Ed.

Pictorialism

For Beginners

Harold G. Grainger, A.R.P.S.

Part VIII. The Association of Parts

IN this series of illustrated articles attention has already been directed to certain principles which might be said to be universally regarded as eminently desirable in picture making with the camera.

Whilst possessing a good grasp of what to do to obtain a predetermined effect, pictorialists should never lose sight of the fact that, as is now generally recognized, in certain well-defined directions art differs funda-



A

mentally from science. Whilst science may be said to have its own fixed standards, art, being something which might be described as intangible, cannot be measured in any like manner for to a great extent it depends on the response of the individual to emotion. Great dissimilarity in taste is, in consequence, observable in different persons; a circumstance due to strong personal preferences as well as powers of appreciation and appraisal. Such variety in response necessarily has some bearing on art, or what the average person considers art. If these differences are, as they should be, taken into consideration, it will be obvious that it would be difficult, because of the activities of personal pre-dispositions, to set down in writing definite rules or laws on composition which are expected to be strictly adhered to. Rather is it necessary to secure, as far as may be possible, such arrangements of objects in the picture space as will appear a pleasant pattern or design. Component parts of the subject should have definite association with each other—so planned that isolation of important units is avoided. Particular attention to satisfactory grouping is therefore obvious.

This is largely facilitated by careful consideration and arrangement of the foreground. In the majority of pictorial efforts this part of the subject is so prominent that all else, as far as material is concerned, is more or less dependent on its relationship with them. If those parts of the subject nearest to the observer have not such proper contact or association, the sense of completeness, so essential to harmony, will inevitably be absent. Again, what else but the foreground enables one to appraise the correctness or otherwise of tone values or the distance from each other of objects represented? Without doubt the value of such arrangements of foreground material as will effectively influence pictorial rendering is inestimable.

Analysis of the two landscape subjects, A and B, will, I trust, make some of these observations clear. In (A) which features a homestead with fruit and other trees, we have as foreground interest a corner of a pond



B

on and about which a flock of geese disport themselves. Although the domestic buildings and setting are not only interesting in themselves but satisfactory in arrangement; and the geese moreover provide appropriate close-up interest, the subject fails as a picture because these important items are separate entities. There is nothing to link them together. Had there been, for example, a number of geese coming from the direction of the homestead to join the rest of the flock at the pond they would have provided the very thing necessary to connect the two. At the same time the pool of water would still appear isolated from the rest of the subject, instead of being, preferably, a useful auxiliary. As this composition-weakness could not be avoided the best plan in the circumstances is to make use of the upper part only of the subject; indeed, such a trim would provide an effective panel picture.

B, a landscape not dissimilar in subject matter, is much better pictorially than A, despite the fact that the village school at the top of the hill, a conspicuous feature of the composition, is, because of its more formal architecture, not too pleasing. Nor are the trees so satisfactorily associated with this building as are those in A, the companion landscape. B is better than A chiefly because of the way the contours of the whole of the subject conform to a more agreeable pattern. There is a general convergence of line towards the ducks in the stream, which adds considerably to the value of this area of light tones. Thus there is satisfactory coordination of the various parts.

It will, I feel sure, be recognized that it is difficult to explain by text alone the advantages of following a particular course in building up a picture; or for that matter the disadvantages consequent on adopting other rules. Illustration is far better, and when these are possible, comparative



C



D

illustrations are likely to convey the maximum of information. That is why this routine has been adopted in this series of practical articles for beginners in pictorialism.

Proof that even the simplest possible subject matter may be of very great value as foreground interest is seen in the two snow scenes herewith, featuring a fine old hawthorn tree, a couple of ponies and a trodden path. The whole is enlivened and beautified by the presence of sunshine, without the benefit of which the subject would not have been worth taking for it not only gives sparkle to the snow but shows us its surface undulations as well. Consider how weak and unsatisfactory the scene would have been but for the cast shadows from the ponies and tree which provide support and interest where most needed in illustration C! It is worthy of note too, that in both views the path made by the ponies from the foreground to the base of the tree was particularly necessary if any picture making effort was to be attempted. How fortuitous the sunshine and shadow of this trodden path which, directionally, supplies both opportunity and encouragement to observers to follow it into the picture space! Of the two renderings C is a great improvement on D because of the better grouping and arrangement of constituent parts. In addition to the fine sweeping contours of the path which lead just where they are most useful, the ponies, themselves a satisfactory group, are agreeably placed as regards their relationship with the tree. In brief, there is completeness, a linking up of objects in illustration



E



F



G

C which is lacking in illustration D. Whilst as in C, the trodden path in D leads pleasantly to the tree, the ponies have now walked off by separate ways into the distance, becoming isolated units in the view. The shadows from the cast-iron fence, which had to be trimmed off the right side lead, not into the picture space, but in a direction somewhat antagonistic to the path.

The failure of D to satisfy cultivated taste is in fact largely due to the presence of many separate units dispersed too freely within the picture space. Because of this deficiency in the quality I have labelled coordination of parts, it was impossible to produce anything of pictorial value with so many scattered interests.

The landscape views E, F, and G, in each of which is featured an old boat, further demonstrate the value of good grouping and suitable arrangement of objects included in picture-making efforts. This landscape setting, though obviously beautiful in itself, would not be satisfactorily balanced either as regards its masses of tone or distribution of interest, without the boat in the foreground. Take illustration E for example and imagine the boat removed beyond the margins of the picture! At once the light-toned foreground, bereft of its chief interest, (which, by the way, happily embodies dark, light and middle tones), would lose its value as an important asset of the composition. The subject would, in the circumstances indicated, be badly balanced, the top-left corner especially attracting too much attention by the concentration there of the darkest large area of tone.



H



I

Another attempt, illustration F, is an improvement on E because of the introduction of a hawthorn tree. This upright mass of dark tone is a particularly useful addition for two reasons—it brings stability into the composition and introduces variety of line. With more interesting subject matter boldly displayed in the foreground, woodland and stream rightfully become secondary in importance. Though pictorially better than E, illustration F is not as satisfactory as G, our next effort, because of the inferior grouping of objects and the definition which, apart from the tree and boat, is a little too sharp. Look, too, at the position of the boat in F! Not only is it too far from the tree for these to be effectively grouped (they are not suitable to be used as chief and secondary interests) but—and this is a very awkward arrangement—its position is too central between the tree and the picture margin.

Now consider illustration G. Here a feeling of completeness, of harmony between foreground and distance is dominant. The planning too, is much more agreeable as together the boat and tree group well in the picture space; the distance is rendered with greater delicacy but without loss of form by the employment of differential focussing. By no other means, except the presence of mist, could this almost stereoscopic relief have been obtained against the woodland background. Without this artistic quality, the sense of aerial perspective, so highly esteemed in pictorial efforts of this kind, would have been largely absent. However necessary fulsome detail may be in other branches of photography it is out of place in the artistic representation of landscape subjects embodying foreground, middle distance, distance and sky. Nor would such efforts, full of detail in each of the planes, as demonstrated in a previous article in this series, be a natural presentation of such a scene owing to limitations incident to human vision.

That the exercise of care in the grouping of elements in picture making is imperative is furthermore demonstrated by three other landscape efforts in which different arrangements of the same objects are shown. It will be observed that the viewpoints selected are within the few yards of those from which the previous three examples were taken. On this occasion it



I

was desired to make as good use as possible of daffodil blooms in the immediate foreground. It was soon found, however, that the disposition of the three prominent trees in relation to each other and the picture area, demanded more than usual consideration if they were not to be allowed to upset the balance. In H, for instance, the position occupied by the principal tree could hardly be worse. Standing midway between two other trees in comparatively bold relief, we have a good impression of an inverted triangle. Though beautiful in themselves, the daffodil blooms on the right do not provide sufficient compensation to effect satisfactory balance. Nor is improvement possible by an alternative trim.

Another arrangement (I) was obtained from a viewpoint more to the right, but here again whilst the flowers are fairly well displayed, and the positions of the three trees show improvement, the complete result is not good because the two outer trees are far too close to the margins. Moreover, the principal daffodil groups appear too centrally placed between the picture margins. Another serious fault will also be noticed in this view. The stream separates foreground and distance into two almost equal areas.

The last of these three views (J) proves that by taking sufficient preliminary care all the faults just mentioned can be avoided. Take the daffodils, first of all! Their position in the foreground is very much better; principal groups arranged where most helpful and a few stray blooms on the left, just sufficient to carry interest and light into this corner. The stream, better positioned lower in the picture space, now provides oppor-



K



L

tunity to show an increased area of woodland beyond. The three trees are now arranged to give a much better balance of mass and tone, and they are also in more harmonious relation to each other. Finally, marginal interest, a serious blemish in view "I," had to be avoided, as few things are more disturbing to unity and good effect than boldly presented objects conveying the impression that they have only just managed to be included in the picture. Far better is it, whenever possible, to secure such an arrangement of parts that the eye can pass comfortably from one to another in the picture space without any thought that here, or there, is where the picture ends.

I seldom think it advisable to place too much reliance on geometrical divisions of the picture space which provide arbitrarily, points on which the principal interest should be placed. Opinions naturally differ considerably on such controversial matters. Of one thing I am sure. Artists trust to their instincts in the appraisal of what is desirable in both arrangement and grouping; they have no place for anything artificial—their nature would rebel against such intrusions.

Two final illustrations, K and L, are included to show that a centrally placed object, if only it is sufficiently important, is compatible with good taste. This arrangement is frequently seen in religious subjects containing many figures and was often successfully employed by the old masters when they desired to make everything subservient to a central idea. To left and right of the church in L interest value and tonal areas are almost evenly balanced and the same might also be said of the heavier foreground tones. As will, however, be seen by illustration K, the attempt to secure a picture showing the tower occupying a position more to one side is not satisfactory, as the dramatic touch, which is clearly the *motif* of the effort, is immediately lost. For this very good reason illustration L is preferable to its companion. The triangular shaped pattern of the church and base offered little opportunity for securing either compensating lines in opposing directions, or areas of dark or light tones—either of which might have been used to modify the composition. Although it is only on comparatively rare occasions that a principal object requires a central position in the picture space, it is noticeable that, when occasions so demand, prominent exhibitors do not hesitate to centralize an important feature.

Ultra-Violet Light For Enlarging And Printing

Theodore Z. Herr

ONE of the most recent and interesting developments in photography has been the application of ultra-violet light to the processes of printing and enlarging. It is a well known fact that photographic emulsions are most sensitive to ultra-violet light of a frequency between three thousand and four thousand Angstrom Units. A light with this same frequency range is now available in the form of a gaseous high voltage tube with

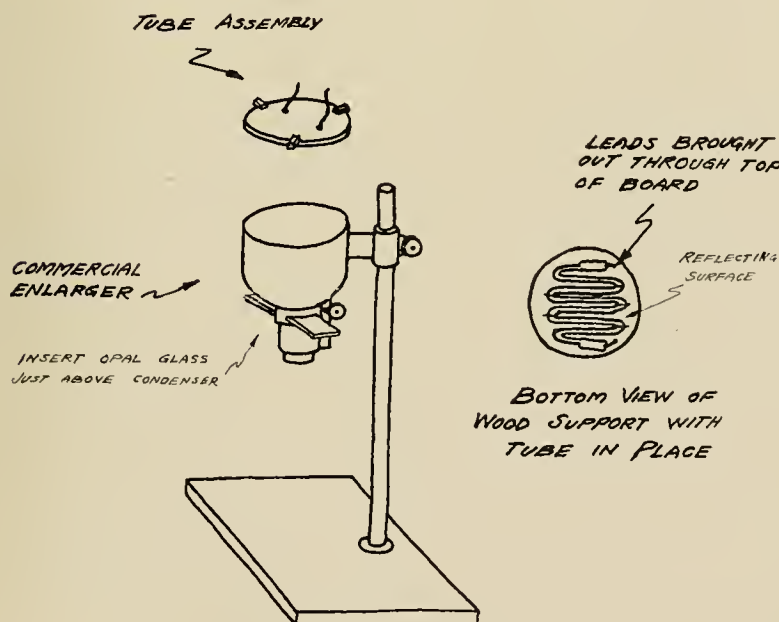


Figure 1

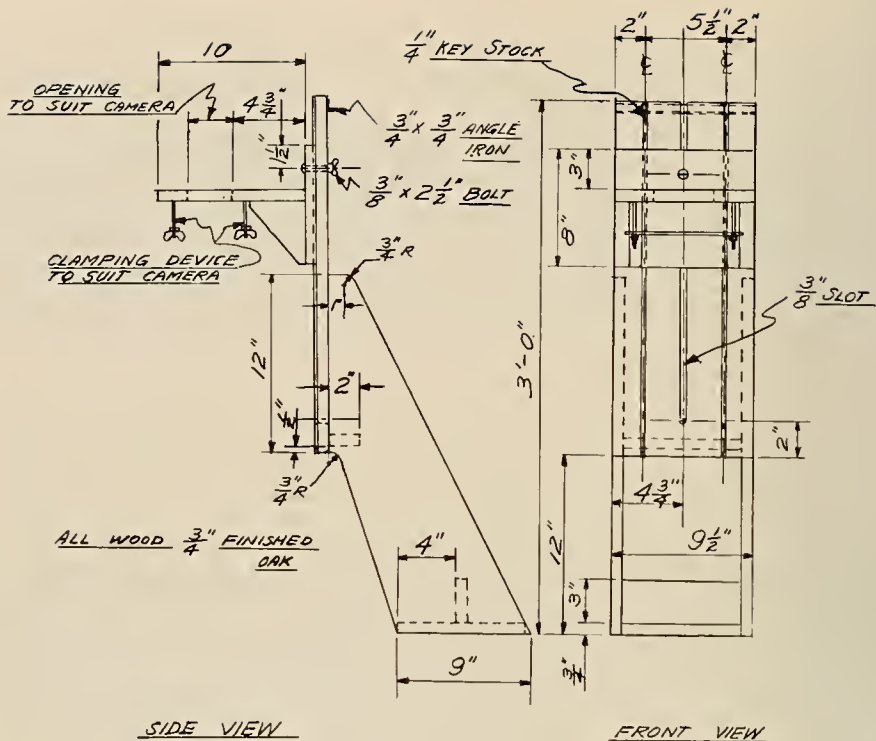


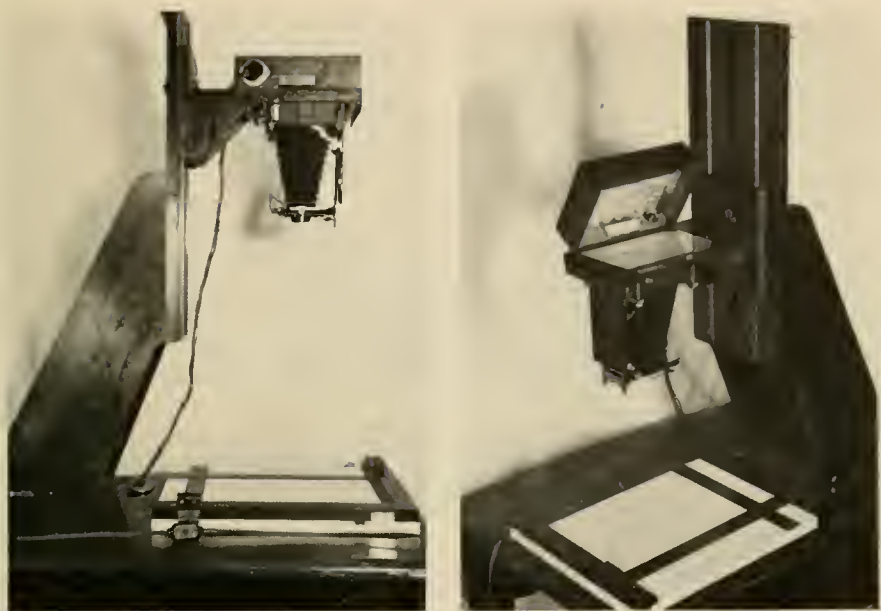
Figure 2

plenty of visible light for focussing. This tube is unique in its low cost of operation, low heat emission, high actinic qualities and long life.

The tube used in the enlarging apparatus described here is in the form of a grid, and measures about five and a half by nine inches overall. The grid shape was found to give the most even light distribution after careful experiments with tubes of various other shapes.

A tube such as the one described is of sufficient size to enlarge negatives nine by twelve centimeters, or three and a quarter by four and a quarter inches, and should be operated at about six thousand volts. This voltage is supplied by a small step-up transformer of the neon sign type.

The author's enlarger is a home-made one and the adaptation of this new light source was extremely simple. Incidentally, the adaptation of such a light is quite as simple in any of the popular models of manufactured enlargers. All that it is necessary to do is to remove the top of the lamp house and the old lamp and cut a piece of plywood to hold the tube and fit the light chamber. A tube of the proper size to fit the housing is easily obtained and can be attached to the plywood as shown in Fig. 1. A first class neon sign maker should be able to supply a tube suitable for this purpose, filled with a mixture of Argon and Mercury Vapor.



*Two views of the completed enlarger
diagrammed in Figure 2*

A low cost but efficient enlarger can be made in the home workshop, as shown in Fig. 2. The enlarger referred to was made from these plans and a "Welta" plate camera with an $f4.5$ lens and double extension bellows used for the projection lens. It is possible to project a picture equal to the size of the negative with this enlarger, and by projecting from the table top to the floor, to enlarge to about two by three feet. Any size enlargement between these limits is easily made by moving the camera assembly up or down.

The size of the new ultra-violet lamp is one of its many good features. Where the distance from the lamp to the negative would have to be nine inches to get an even diffusion with an incandescent lamp, a distance of only three quarters of an inch is all that is necessary with the ultra-violet tube. This is due to the grid shape of the tube.

The flashed opal diffusion glass in this enlarger can be very close to the negative carrier. As there is no heat given off during enlarging to soften the negative as is the case with incandescent enlarging lamps, the negative can be safely held between glass.

This ultra-violet lamp can be run continuously for hours with only about a five degree temperature rise at the negative. It can be turned on and run for focussing as long as is desired. As it is practically heatless, and has a life of more than a thousand hours, it has distinct advantages over two and five hour bulbs. Still another astonishing feature is the fact that the electrical energy used by the tube is only 47 watts as compared to approxi-

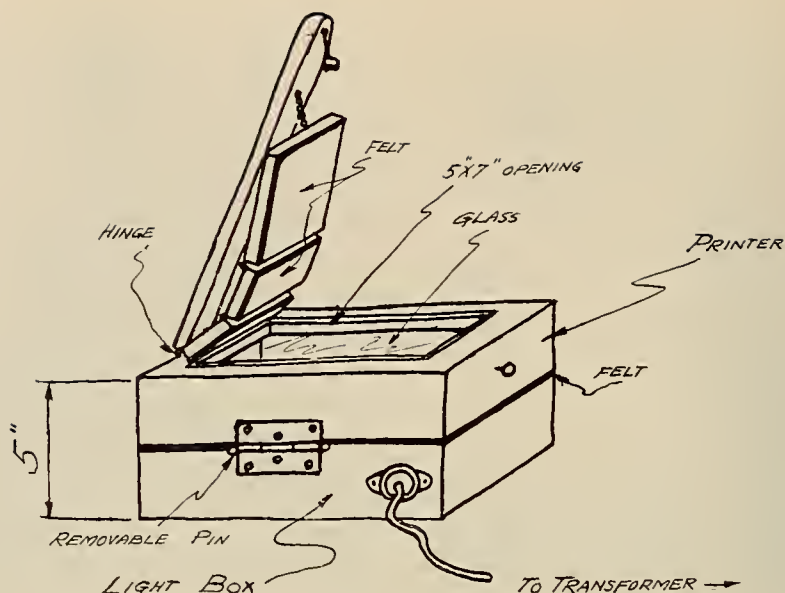


Figure 3

mately 250 watts for incandescent enlarging bulbs. The projecting qualities of the tube are improved by the use of a reflector. The best material for this purpose is crinkled aluminum foil. Tests with a foot candle meter on other reflecting surfaces such as a mirror, white paint and aluminum paint indicate that aluminum-foil is the most efficient.

The cost of the enlarger not including the camera or ultra-violet tube was \$3.00. The tube, transformer and wiring attachments cost less than \$15.00. For anyone who does any amount of printing or enlarging, this lamp should pay for itself within a very short time.

In using the new tube, a considerable reduction in exposure time will be noticed. It has been my experience that a negative requiring fifteen seconds exposure at $f/8$ with an incandescent enlarging bulb requires but five seconds at $f/8$ with the ultra-violet tube. This reduction is due to the extreme sensitivity of photographic emulsions to light of the frequency emitted by this ultra-violet tube. Stray light from the tube must be eliminated from the room in which the enlarging is done, as it will fog any printing paper opened in the room at a surprising distance.

The light box was made so as to be removable from the enlarger and substituted as a light for contact printing. Fig. 3 shows one method of making a printer for use with this light. The light is so fast that a distance of at least five inches is necessary between the tube and the printing paper in order to make it possible to print from thin negatives.

Conversion Of Weights

Harry C. Lassen

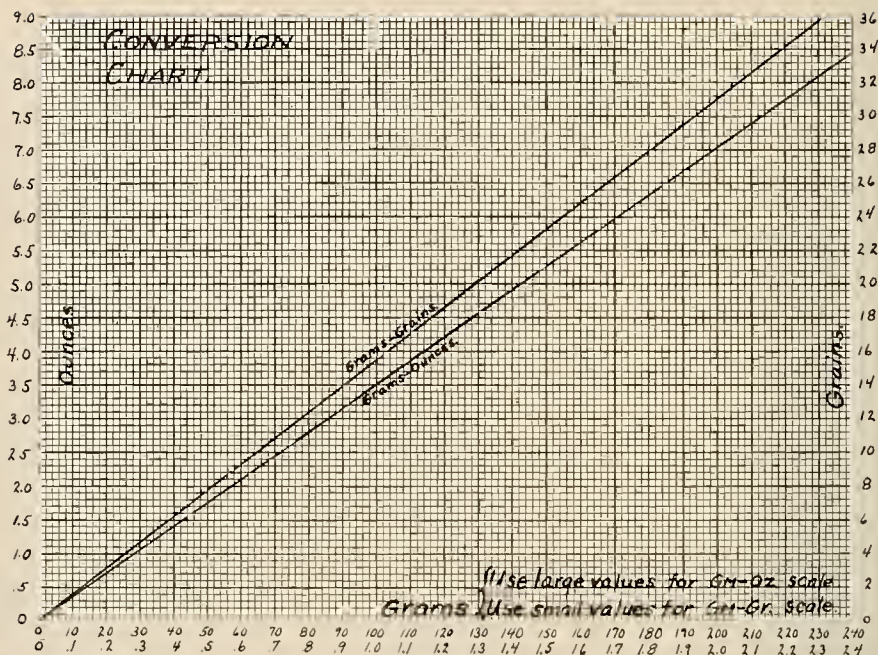
THE accompanying graph is presented to illustrate the type of chart used in the dark room of the Green Briar Camera Club in converting formulas. We have selected the metric system for all our measurements, but the chart would convert values in the opposite direction equally well.

A carefully constructed graph yields surprisingly close approximations. Where the utmost accuracy is required the conversions are made in the usual way and the graph used as a check on computations.

The cross-section paper used is of the standard kind, available at any school-supply store. These sheets measure about 7" by 9½" without the border, so that four trimmed sheets may be mounted on a 16" by 20" card to make a large and accurate chart. The larger the chart, the less the probability of error.

When it is desired for economy of space to use a number of graphs on the same chart, confusion may be avoided by using different corners of the chart as zero points for the different graphs. Make a hole near the midpoint of each edge, and hang the chart from a nail through the appropriate hole to bring the zero-point of the desired graph to the lower left hand corner. Obviously, the scale of values shown on the edge should be written in according to the position in which the chart is to be used.

Since all conversion functions are expressed as straight lines it is necessary, in constructing a graph, to select only one pair of values in addition to the zero point. For instance, in the graph shown above, the point corresponding to 8 ounces=226.8 grams was found and connected with 0=0 by a straight line. This then gives us the line for converting ounces into grams or vice versa. Similarly the line for converting grains



into grams or vice versa is obtained by selecting any known pair of values and connecting that point on the graph with the zero point by a straight line.

The reader will note that ounces are scaled in a vertical column at the left, grains in a vertical column at the right, and grams along the base. The large gram values are for use with the "Grams into Ounces" scale, the small values for use with the "Grams into Grains" scale.

In using the graph all one need do is to read the corresponding values directly from the chart. For example, to find the equivalent of 6 ounces in grams, we follow the line opposite 6 ounces until it cuts the grams-ounces diagonal line, and then follow perpendicularly downward to the base of the chart where we read that 6 ounces equals 170 grams.

To convert grams into ounces simply reverse the procedure, and to convert grains into grams or vice versa proceed in the same manner but use the Grains-Grains diagonal line and read the grains values from the right hand column. Care must be taken not to confuse the two diagonal lines. The following conversion factors may be found useful in constructing a chart.

METRIC		AVOIRDUPOIS
1 gram	equals	15.432 grains
1 kilogram	equals	2.2046 lbs.
1 kilogram	equals	35.2739 ounces
1 liter (1000 c.c.)	equals	33.813 fld. ounces
28.35 gm.	equals	1 ounce
.0648 gm.	equals	1 grain
29.573 ml.	equals	1 fluid ounce

Cinema Section

Edited by

William A. Palmer

To The Industrial Film User

SOME time ago we discussed the matter of making silent business and industrial films directly in 16mm rather than resorting to the more elaborate and very much more expensive method of photography on 35mm film with reduction prints on 16mm. We brought out the point that as long as 35mm copies were not needed, there was no advantage in the expensive 35mm production since exactly comparable quality could be obtained using reversal duplicates from 16mm reversal master films. The argument presupposed that the same amount of care and skill were available for the two types of production.

In that same article in the July, 1936 Cinema Section we mentioned the problem of adding sound to the directly photographed 16mm film, suggesting that the sound could be recorded on 35mm film and reduced to 16mm or could be recorded on 16mm directly and printed. No comparison of quality of sound between the two methods was made, but it was mentioned that the direct 16mm production of picture was at a disadvantage as far as sound was concerned because the reversal duplicates are ordinarily made in such a way that the copy is "off standard."

In the past year there has been a good deal of experimental work done with the production of both sound and picture in 16mm film directly, and the results of a number of workers have been so encouraging that it can now be definitely stated the quality of *both* picture and sound on a film produced directly in 16mm *can be* as good as most 35mm reduction prints. In fact, a properly recorded 16mm sound track is often superior to one reduced from a 35mm negative. In addition to this, through the use of Kodachrome duplicates which are now being made with considerable success by several companies, the directly produced 16mm film can be in color. The Kodachrome duplicates, using Kodachrome film for the master as well as the duplicate, are not perfect by any means, but they furnish the best known method of obtaining a number of color copies on 16mm film with sound.

Many people who have been in the film business for years still consider 16mm film to be almost in the toy class and snort at the idea that a complete sound picture of first rate quality can be made directly on 16mm film. The proof

that such can be and is being done is furnished by the fact that in the recent selection by the U. S. Department of Commerce of the ten best industrial films in the country, one of these was produced, both sound and picture, entirely on 16mm film!

It should not be supposed that any scene-spraying 16mm camera owner can go out and shoot an industrial film which will rival the 35mm product of a producing company. Any worthwhile industrial film must be made by people who are thoroughly experienced in motion picture technique. We are talking about the tools of picture making, not the picture makers. As tools the best present day 16mm cameras and sound recorders are thoroughly satisfactory for serious film production, but there are certain details of operation and laboratory procedure that must be handled properly to obtain the maximum results. We mentioned some of these details in the previous article with regard to the pictures. Here we intend to discuss some of the details of sound recording for 16mm film and explain why directly recorded 16mm can often surpass a reduction print from a 35mm sound track negative.

The Characteristics of 16mm Sound Track

In all methods of sound recording, good fidelity of sound is achieved when all the various sound vibrations can be reproduced with the same relative intensity that they had in their original form. There are other factors governing good sound quality but the relative intensity of different rates of sound vibration, called "frequency response" by engineers, is most important. The range of sound vibrations that the human ear can pick up is from about 16 vibrations per second to 20,000 vibrations per second. The best of recording systems, however, cannot reproduce sounds with a higher rate of vibration than about 9,000 per second. Even this limit to high frequencies is rarely attained in practice and 16mm recording just cannot approach it.

You see, sound on film is recorded and reproduced by means of a very fine slit of light, but nevertheless that slit has a finite thickness. The thickness of this light beam coupled with the rate of movement of the film, controls the upper limit of recorded sound frequencies. It's just as if you were given a paint brush which is one inch wide and told to paint a series of parallel lines one inch apart. You would not have a series of parallel lines at all, since each new line would just touch its neighbor. With a given width of paint brush there would be a definite limit to the closeness to which the lines could be placed and still remain separate lines. In an exactly similar manner the thickness of the beam of light in the sound recording mechanism determines a frequency above which no sound vibrations can be distinguished. There is a slight printing loss too, so that the practical limit in 16mm film is about 4,000 vibrations per second.

In addition to this limit or high frequency cut-off at 4,000 vibrations per second there is a progressive decrease in the intensity of frequencies as they approach the 4,000 mark. This decrease in the intensity, known as "slit loss," is noticeable in the region from 1,000 to 4,000 vibrations per second. So the ideal 16mm sound track is one in which the low frequencies up to 1,000 are recorded with uniform intensity and the region between 1,000 and 4,000 is "peaked" to compensate for the loss introduced by the recording light beam. Also it is very important that there be no frequencies above 4,000 for not only will they fail to record, but they will distort the other lower frequencies. This loss of high frequencies and their correction is shown graphically in figure 1. In this illustration

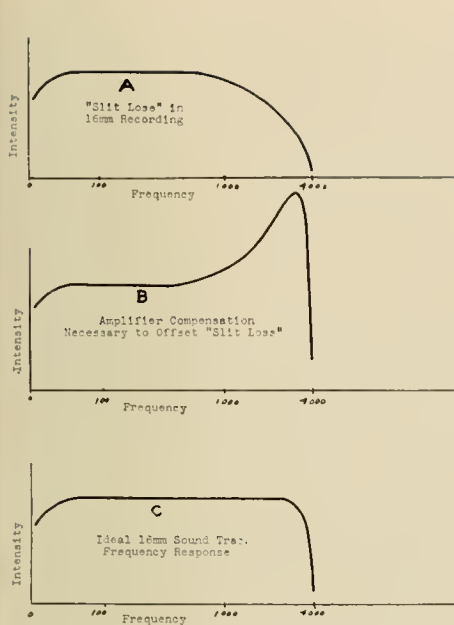


Figure 1

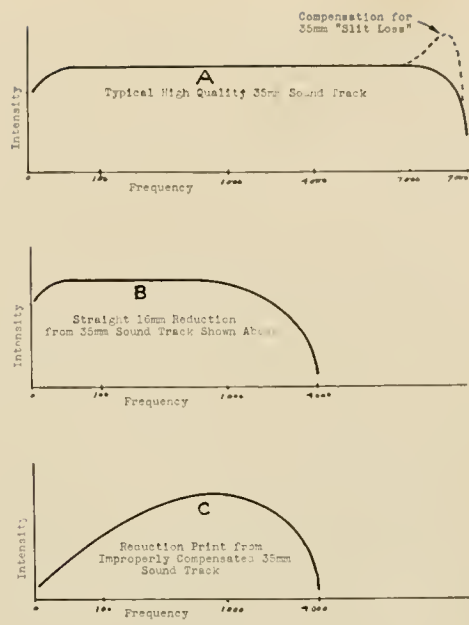


Figure 2

three curves are represented. The height of any curve above the horizontal base line represents the intensity of sound on the film at the frequencies marked. The three curves are the same up to 1,000 but beyond that they differ. Curve A represents the characteristic of the sound track if no compensation is made for the loss of the recording light beam and the amplifier and recording element are delivering light impulses of uniform intensity throughout the frequency range. To offset this drooping curve A which would make the sound very bassy and muffled, the recording amplifier is adjusted to give an exaggerated amount of high frequencies as in curve B. Then since these two characteristics are combined in making the complete recording, one fills in where the other is lacking and the resulting 16mm sound track has the frequency response shown in curve C. This last curve with its so-called straight line characteristic (except for droops at the extreme ends) is the desired result on all good recordings. In the reproduction of the track, the light beam of the projector sound unit introduces a certain loss in high frequencies too, but this is taken care of by the projector amplifier which is designed to compensate for it.

Now let's see what the story is when a 16mm sound track is made from a 35mm one. The conversion of a 35mm sound track to 16mm can be done in one of two ways: The sound can be re-recorded by a combination of a play-back machine or film phonograph for the 35mm film and a 16mm recorder, or it can be reduced on a machine known as an "Optical Reduction Printer." The first method seems hardly worth considering at all unless the 35mm recording is needed, for it involves all the losses and difficulties of 16mm direct recording plus a few inherent in the 35mm film. The process, however, is a feasible one but rather expensive.

The Optical Reduction Printer for sound is somewhat like the well known optical printers for reducing the picture from 35mm to 16mm. The essential difference is that the two films move continuously instead of frame by frame as in the picture printers. The machines are theoretically and practically proven devices for compressing the length and width of 35mm sound track to 16mm dimension but they do not introduce any correction for the "slit loss" on the 16mm film. The ideal 35mm sound track has a straight line relation in the frequency region that can be reproduced on the 16mm film, for its "slit losses" are way up in the region between 7,000 and 9,000 vibrations per second. This is shown graphically in Figure 2, curve A. Then when this sound track is reduced to 16mm the "slit losses" are introduced (the optical system of the Reduction Printer uses a fine beam of light similar to a recorder). The result is a 16mm track with a characteristic as in Curve B, Figure 2, but with the added difficulty that there are frequencies higher than the limit of the 16mm film, which cause a slight distortion of the sound. This type of reduction print is not nearly so good as a properly made direct 16mm recording.

If a 35mm recording is made with the proper "peak" in the region of 1,000 to 4,000 vibrations per second and a sharp cut-off at 4,000 cycles, the resulting 16mm reduction print will be excellent. But here again the procedure seems hardly justified since a 35mm sound track so recorded would not be very satisfactory for 35mm reproduction. If expense is no object, it is a fine method of obtaining a first rate 16mm sound track. Often the recording engineers will attempt to make a 35mm sound track which will reduce successfully, by cutting out the low frequencies instead of adding a "peak" in the high frequency region. This is a very poor procedure because the "slit losses" are helped very little and the resulting characteristic is like the curve C, Figure 2. Such a track sounds like an old fashioned phonograph since it has neither good high or low frequencies.

Thus we see that there are two ways in which first class sound track can be obtained on 16mm film: (1) The sound can be recorded directly on 16mm film by a properly designed recorder with a "peaked" amplifier. The resulting master 16mm sound track can then be printed by contact onto the final print along with the picture. (2) A specially recorded 35mm sound track can be recorded also with a "peak" in the proper place and this can be printed on the combined picture and sound film by an Optical Reduction Printer.

If both of the above methods are executed properly the results are exactly comparable, but since method (1) of recording directly on 16mm film is by far the cheaper, it should be the one to gain favor in the future. A comparison of costs of the two methods will show that the 35mm reduction method will cost at least two to three times that of the direct recording. The rental of recording facilities, cost of film stock, processing charges, and synchronizing time will all come much higher in method (2).

The Combined Print

Since we believe the directly recorded 16mm sound to give the best results, what about the picture that goes with it? We stated previously that the finest of picture quality could be obtained by making reversal duplicates from 16mm reversal masters. The reversal process for 16mm film has certain definite advantages such as finer grain, less tendency to show dirt and scratches, and a tougher emulsion. It so happens that all of these characteristics are an advantage for sound track too, so the reversal duplicates with sound are to be recommended as first choice.

We mentioned earlier one disadvantage of the ordinary reversal duplicate as far as sound is concerned. Usually the duplication is made on a contact printer which makes a finished copy which must be run in the sound projector with the "emulsion in" whereas the projectors are designed to operate best with a film of the "emulsion out" kind. This disadvantage is completely overcome, however, by the use of an optical printer for the picture printing operation. There are a number of smaller laboratories now equipped to do this type of work and it is our opinion that the system will soon come into general use as soon as the larger laboratories see the tremendous advantage in it.

Sound on Kodachrome

Good sound track on Kodachrome film is quite possible although a bit more difficult to obtain than on black and white film. Kodachrome film, while having no grain, cannot record the extreme detail of reversal black and white. The additional loss in high frequencies is not serious, though, and a slightly greater "peak" in the recording takes care of it. Of the two types of sound track, variable area and variable density, the variable area is much better for use on Kodachrome. With the variable area sound it is only necessary to copy the shape of the sound waves whereas the variable density may get into trouble with the high contrast of Kodachrome (its Gamma is over 2.0) and the change in color with density unless a "neutral" light is used in the printing operation.

There is one other difficulty with sound on Kodachrome caused by the abrasions placed on the celluloid side of the film in the processing machines. These abrasions raise the background noise level definitely on "emulsion in" prints, for the abrasions are in sharp focus with the projector sound system while the sound track itself is slightly out of focus. The optical printing of Kodachrome film, however, greatly reduces the difficulty, for the abrasions are then thrown out of focus while the sound record is in focus. The resulting cleaner high frequencies and lower background noise make two more scores for optical picture printing.

Questions and Answers

Question: Is a high speed lens necessary to photograph fast moving objects?

Answer: The term "High Speed" lens is a misnomer really and would better be called a "High Aperture" lens. High speed refers to the ability of the lens to admit a great deal of light (thus making it possible to take pictures with a very short exposure when using a still camera) and has nothing to do with the ability of a movie camera to photograph fast moving objects.

Question: Which is the better type of screen, a silver or beaded surface?

Answer: The glass bead screen is much better for ordinary uses. The silver surface will give a brighter picture when viewing the picture from positions directly in front or behind the projector, but gives a very dim picture to spectators sitting at either side. The glass bead surface gives a good bright picture and still gives sufficient light for people at the side.



"Fragment of the Grand Canyon"

Ralph Rex

Advanced Medal Print

■ The Grand Canyon is anything but an easy photographic subject. Its vast size and its bright coloring are both qualities which place the camera at a disadvantage. On top of that there is usually a considerable atmospheric haze, which results in flat pictures unless the photographer knows how to deal with such a situation by the use of filters, and (even more important) by including a strong foreground accent. Notice how Mr. Rex has used the latter device in this picture. As proof of the difficulty of the subject matter we point to the fact that though the Canyon is under virtually continuous camera bombardment we see very few good pictorial photographs of it. This is one of the rare good ones.

A less expert photographer would probably make the mistake of using too strong a filter on a subject such as this. If that were done the background material would be strongly defined, the feeling of distance would be lost, and (most disastrous of all) the dominance of the principal object destroyed. Notice then, that the solution is to use a very light filter and to obtain brilliance and full gradation in the principal object by bringing it close to the camera and exposing for it.

Data: $3\frac{1}{4} \times 4\frac{1}{4}$ " Speed Graphic; 13.5 cm. Zeiss Tessar; $1/25$ th sec. at F:8, on Agfa Plenachrome film pack in Buffered Borax; weak sunlight in Sept., with K-1 filter; 11×16 " print on E. K. Vitava Projection, in M. Q.

**Second Award
Advanced Class**

■ It is interesting to observe how the low camera angle helps to improve the structure of this composition, by adding apparent height to the girl's figure in relation to the seated figure. It also helps to emphasize the swirl of the skirt, so that the low camera angle may be said to add to the sense of action in the picture, as well.

The opening in the clouds appears at a rather unfortunate position. Placed as it is mid-way between the two heads and on the line set up by the direction of the girl's glance, it attains a shade too much prominence. We would prefer to have the girl's up raised arm curved around toward her head with the wrist bending downward. With such an arrangement the arm and hand would then become more closely associated with the body and would carry the eye around *into* the picture, by reason of its pointing downward from the wrist. In such case it would not be necessary to trim away the hand in order to avoid an isolated accent which would not be in keeping with the composition. As things are we think that the present trimming is the best solution, though it does constitute the one weakness in the arrangement.

Data: 4 x 4 cm. Rolleiflex; 1/100 sec. at F:3.5 on E. K. Panatomic, in Metol-Borax; Duto diffusion screen; 11¼ x 11¾" print on Agfa Brovira.



"Walzer Fur Dich"

Peter Kocjancic

Ljubljana, Jugoslavia



"Resignation"

Buck Hoy
Chicago, Ill.

**Third Award
Advanced Class**

■ We think that Mr. Hoy has worked out a quite effective and interesting arrangement of the figure in this picture. The long sweeping line which runs from toe to shoulder is carried on even further by the arms, and is surely beautiful in itself. The shadow side of the subject has been handled very skillfully. There is just enough modeling and detail to suggest the form, and the annoying qualities of complete silhouette are avoided. The knee appears a trifle assertive for two reasons. First because it thrusts upward so sharply and so high. Perhaps if

the right heel had been lowered a trifle a slightly better arrangement would result. Second, the thrust of the knee is emphasized by the highlighting behind it which we think is a trifle overdone. This is a secondary light area and should be more definitely subordinated to the light passages about the head.

Data: Print size, 10½ x 13¼".



"Pri Molitvi"
Pfeifer Marijan
Ljubljana, Jugoslavia

Data: $4\frac{1}{2} \times 6$ cm. camera; Zeiss Tessar F:2.8; $1/5$ th sec., at F:4, on Agfa Isopan. Print size $11\frac{3}{4} \times 15\frac{1}{2}$ ".

■ We have no intention of reiterating the endless discussions concerning the merits or demerits of diffused focus in photography. As is always the case, those who oppose it have carried their condemnation to extremes in order to support their arguments, while those who approve often weaken their position by over-doing it or by using it in the wrong place. If we once grant the basic premise (there are, of course, those who do not) that it is legitimate for photographers to adopt a romantic approach to their subject matter, it follows that we should approve a reasonable amount of diffusion when the occasion calls for it. Such an occasion usually arises when particular emphasis is placed on the light itself, for diffusion seems to make visible the shimmering quality of light. The present picture is an apt illustration of the point. The emphasis placed on the light falling from above enhances the religious idea behind this subject.

Fifth Award

Advanced Class

■ There is a most interesting swirling effect in the railing and its associated shadows, and because of that this material lends itself admirably to treatment as a semi-abstract pattern. To our eye there are three elements in the print which do not conform very well with the nature of the principal theme. By that we mean that they are not well related to the composition. These are the hand-rail at the right, the vertical line of the wall which inclines to the right, and the dark-toned area in the upper left. Each of these in various ways distract the eye from the main focus of the composition.

It seems to us that we can eliminate practically all of this weakening effect by simply trimming the print down from the top until all of the hand-rail at the right is removed. Try it and see if you agree.

Data: 8×10 " view camera; 10 secs. at F:32 on panchromatic film; 11×14 " bromide print.



H. K. Shigeta
Chicago, Ill.



"On the Allegheny"

Victor Pokorny

Amateur Medal Print

■ This is the second first award which Mr. Pokorny has won. Consequently he is notified of his promotion to the Advanced Class with our compliments and congratulations.

Here we find interesting subject matter made doubly effective by the low angle of light. The bridge performs a most useful service by checking the movement of the eye toward the upper edge of the print. If the bridge were not shown the eye would surely want to follow the pathway of light over the water. Such a condition would introduce a further confusion. The boat is actually traveling toward the observer, pushing the barges in front of it. However, if the bridge material were not there to check any upward movement of the eye, the composition would look as if it were planned for the movement of the boat in the opposite direction.

Data; 9 x 12 cm. Maximar B; 13.5 cm. Zeiss Tessar; 1/100 sec. at F:8, on E. K. Panatomic in D-76; 11 x 14" print on Defender DL normal, in Defender formula.

Second Award

Amateur Class



*Wm. Hojgers
Oakland, Calif.*

■ All will agree that this is a very pleasing little portrait. We have only one suggestion to make and that concerns the baby's clothing. The very dark tone of the sweater contrasts rather strongly with the face so that we are faced with a too abrupt, too violent transition in tone. Such a condition conveys the unpleasant suggestion that the baby's body ends abruptly, just below the chin. In other words, the darkness of the sweater brings about a poor tonal composition, which should be corrected by dressing the baby in a sweater which would photograph as a medium gray tone.

Data: 9 x 12 cm. Linhof; Plasmat lens; exposure by small photoflash at F:16, on Defender XF Pan., in ABC Pyro; 8 x 10" print on Defender Velour Black, in Amidol.

Third Award

Amateur Class

■ Not so many years ago no exhibition was complete without a large assortment of water-lily pictures. Such subjects are not quite so overwhelmingly popular at the present time, but in spite of the large number which we have seen in the past we feel that there are elements of originality in this picture. We attended a meeting of the E.P.I.C. Group where this picture was under discussion. Some of those present felt that the area occupied by the water-lilies was pushed too far up into the upper left corner. We cannot agree with that view. Rather it seems to us that the present arrangement achieves a very pleasing balance. Further, if the group of lilies were lower in the picture space we think that the idea behind the picture as expressed in the title would be much less clear, and that the picture would become much more commonplace and not nearly as arresting as it is at present.

Data: Ensign Reflex; Aldis F:4.5 lens; 1/50th sec. at F:11, on E. K. Panatomic, in D-76; X-1 filter; 11 x 14" print on Agfa Brovira Royal, medium, in D-72.



*"Tapestry"
Kjell Forsmann
Oakland, Calif.*

**Fourth Award
Amateur Class**

■ Flash bulbs lend themselves particularly well to the making of such lively almost "candid camera-like" portraits as this. It is that very liveliness that is the picture's chief claim to merit. The picture could have been made just a bit more natural in appearance, we suspect, if the light source had been raised enough to reduce the strength of the shadows along the bridge of the nose. Notice that, aside from the expression, the tilting of the head in the picture space is largely responsible for the liveliness so evident in the picture. When such a device is utilized care must be taken to avoid tilting the head too far, for if that is done the picture is likely to give the impression that the subject is falling over backwards. We would say that the tilting in this case has been carried just about to the limit, and feel that a very little bit less might be preferable.

Data: 4 x 5" Speed Graphic; exposure by Super Flash bulb at F:32, on Defender XF Pan., in DK-50; 8 x 10" print on Novobrom, normal, in D-72.



"Another Photographer"

Bates Creel

San Francisco, Calif.



"Pigtails"

Walter V. McKee

Pelham Manor, N. Y.

**Fifth Award
Amateur Class**

■ Mr. McKee has an eye for pictures plus a sense of humor and the two are aptly combined to produce this entertaining little picture. We would like to see just a little more space added to the top, about one quarter inch on the 8 x 10" print would be sufficient. As things are the top of the head on the right virtually coincides with the edge of the print. Such a condition is almost always annoying. In general all contours which approach the edge of a print should either be definitely cut by the edge of the print or have some space beyond.

Data: Super Nettel; 50mm. F:2.8 lens; 1/25th sec. at F:4.5, on Agfa Superpan, in Edwal 12; by one photoflood plus daylight; 8 x 10" print on Agfa Brovira Velvet, in D-76.

Monthly Competitions

Contributors Please Notice

The steadily increasing circulation of Camera Craft makes it imperative that we allow our printers more time in which to produce the magazine. The date for judging these competitions each month must therefore be advanced. Beginning October 1st the competitions will be judged on the first day of each month instead of on the fifth day as has been our practice in the past. PLEASE REMEMBER TO SHIP YOUR PRINTS FIVE DAYS EARLIER THAN BEFORE. JUDGING ON THE FIRST DAY OF EACH MONTH.

Scoring for Club Trophy Cups

The following won points for their clubs in the Advanced Class: Ralph Rex, for the Camera Clique; Buck Hoy and H. K. Shigeta, for the Fort Dearborn Camera Club; Peter Kocjancic and Pfeifer Marijan, for the Fotoklub Ljubljana. Only four points are allowed for Ralph Rex' award since that brings his total to 15, the maximum permitted.

The following won points for their clubs in the Amateur Class: Victor Pokorny, for the Aluminum Camera Club; William Holgers, for the East Bay Camera Club; Kjell Forsmann and Bates Creel, for the E.P.I.C. Pool.

The following prize winner has no club affiliation: Walter V. McKee.

Contributing Clubs

Aluminum Camera Club (New Kensington, Pa.)	Huntington Park Camera Club (Calif.)
The Camera Clique (St. Louis, Mo.)	Kamera Kranks (Durham, Calif.)
East Bay Camera Club (Oakland, Calif.)	Los Angeles Camera Club
E.P.I.C. Pool of San Francisco	Miniature Men (Cleveland, Ohio)
Expo Kamera Klan (Los Angeles, Calif.)	Montreal Camera Club (Canada)
Fort Dearborn Camera Club	Olean Miniature Camera Club (Olean, N. Y.)
Fotoklub Ljubljana (Yugoslavia)	

STANDING OF CLUBS

Large Clubs Advanced Class

Fotoklub Ljubljana	39
Fort Dearborn Camera Club.....	38
Los Angeles Camera Club.....	18
Photographic Society of San Francisco	11
Fotoklub Zagreb	4
Miniature Camera Club of New York....	2

Small Clubs Advanced Class

The Camera Clique.....	27
Baltimore Camera Club.....	6
The Pack Rats.....	2
East Bay Camera Club.....	1
Washington Pictorialists	1

Large Clubs Amateur Class

Golden Gate Miniature Camera Club.....	4
Los Angeles Camera Club.....	4
Photographic Society of San Francisco	4
Miniature Camera Club of Oakland.....	3

Small Clubs Amateur Class

E.P.I.C. Pool	26
Aluminum Camera Club.....	13
Washington Pictorialists	11
Riverside Camera Club.....	9
Oklahoma Camera Club.....	7
St. Louis Camera Club.....	7
Camera Club of Richmond.....	6
Kamera Kranks	5
Nassau County Camera Club.....	5
Norfolk Photographic Club.....	5
Taft Camera Club.....	5
East Bay Camera Club.....	4
Crockett Photographic Society.....	2
San Jose Camera Club.....	1

Club Notes

The Photographic Society of America in Convention

V. E. Johnson

The Third Annual Convention of the Photographic Society of America was held under the auspices of the Fort Dearborn Camera Club at Chicago on Oct. 9 and 10, with headquarters at the Blackstone Hotel.

The convention started Saturday morning with the solemnities of a business session and ended Sunday afternoon in a blaze of oratory. By the time this goes to press, Michigan Ave. will have subsided to its usual somnolence, the Blackstone will have cleared away the debris, and the delegates will be back in the harnesses of their various occupations.

The formal sessions, to keep the record straight, were three in number, to which should be added two luncheons, one banquet and an enmasse visit to the Art Institute where the P. S. A. pictorial exhibit is on display. Of extra curricular activities we have neither knowledge nor curiosity, except to state pragmatically that conversational photography was at its height and headaches none.

During all of this pleasant interlude, the effervescent Dr. Max Thorek presided with éclat, occasionally rushing out between the speeches to liquidate an erring appendix and returning thereby greatly cheered and refreshed. Oh Doctor!

Business Meeting

We leave to Byron Chatto, secretary, the task of recording for the archives the motions—made, amended, withdrawn, and remade—in the potpourri of Saturday morning's session, held at the club rooms of Fort Dearborn Camera Club. The underlying motif was, however, a sincere attempt to evaluate accomplishments and wisely chart the future.

Much thought was given to the ever widening diversity of photographic inter-

ests, and how to find an acceptable common denominator for them all. It was the unanimous and enthusiastic sense of the meeting that pictorial photography should by neither action nor implication be made a favorite child, and steps were taken to so change the mechanics of the organization that all types of activity will be adequately represented.

The matter of degrees and honors was discussed at length and a committee appointed to revise the by-laws to cover this phase. It was agreed that awards for meritorious work should be given without distinction to members and non-members.

Mr. Chatto reported a slow but steady growth in membership, with a total affiliation as of today of some 88 clubs and 300 individuals, making a total group interest estimated at approximately 6,000.

No decision was made as to next year's convention, although several invitations have already been received. It was felt that this should be left to the next administration.

Lectures

The first paper was by Hillary Bailey, who depicted the artistic antecedents of photography—starting with the early cultures and sketching the panorama of aesthetic development from that day to this. Photography brought a new era, he said, but the fundamental psychology that had motivated artists and models throughout the centuries still persists. There is still the eternal battle between art as a medium of self expression and as a medium for making a living; the need to make saleable portraits regardless of what personal revulsion the artist photographer may feel toward prostituting his abilities to that end. "Born," said Mr. Bailey, "in the



Left to right, Dr. David R. Craig, Byron H. Chatto, Will Abbot Kelly, Dr. Max Thorek, Roy F. Dewey, Hillary Bailey.



Moholy-Nagy and Frank Liuni

shadow of the French guillotine, photography is even today too often a cut throat business."

He discussed at some length the problems of the portrait photographer—decrying the mechanical "repeat" methods that have been forced into existence by the exigencies of competition. Portraits, like pie, cannot be factory made, they must be seasoned to suit the taste.

Following Mr. Bailey came David Craig—with a paper on the four print plan promulgated by the Photographic Society of America. He discussed the purposes underlying its original adoption and the modifications that later experience has shown to be desirable. From this distance it would seem that he who tries to evolve a rigid formula for evaluating the merits and determining the relative standing of salon contributors treads a thorny path.

Mr. Frank Liuni, under the caption, "Organizing the Amateurs," presented a careful analysis of the problem of putting into concrete form the advantages that accrue from concerted action. Outlining the rapid increase in the number of clubs during the last few years, he pointed out that the ascending curve was seemingly flattening out, and that a slow decline might be expected. To forestall this, some sort of intelligent concerted action is necessary to stimulate interest. Out of the 390 clubs with 19,000 members on which statistics

were available, the P. S. A. has an affiliation of 88 clubs with about 6,000 members, or nearly 33%; and on that basis he felt that it is in a favored position to serve as the medium for further unification. He enlarged upon the tremendous diversity in photographic interests, pointing out that a reported 10,000 amateurs devote their energies to photographing locomotives, trains and other items of railway equipment; that many hundreds are interested in astronomical and other scientific photography; and that this subdivision of interests is becoming greater every day. He felt that the P. S. A. would ultimately have to become subdivided, not only along the line of photographic classification, but geographically as well.

The Sunday morning session opened with a talk by Rowland Potter on the technical problems that face the photographer, the extreme limitations of the present photographic equipment, and the difficulties that lie in the way of removing these limitations. He discussed the characteristics of films and papers, with curves and pictures to illustrate his points. A storm of questions followed his paper, a storm which would likely have continued ad infinitum had not the clock and the president interfered.

Ghislain Lootens exhibited a series of old and new photographic masterpieces, illustrating his theories that regardless of



*Left to right, Wm. A. Alcock,
Ann Dewey, Wm. Zerbe*



David R. Craig

date, the same elements exist in all of them, and that every venture into the field of the bizarre is followed automatically by a return to the fundamentals that have stood the test of the years. He dismissed the matter of composition with a sentence that will be a comfort to all of those who labor and are heavy laden: "If you have a good picture, don't worry about composition—somebody who thinks he knows will presently come along and tell you why it's good."

And then for good measure, he added these words about print quality: "Tastes in print quality vary greatly, and you can't please everybody." And about the never ending purist vs. manipulation feud: "A camera is something to have fun with—not something to fight about." And this: "Salon entries are the beginning of heart-aches."

Followed then Harry Shigeta, who read a paper on the motif that underlies Classic Japanese Art. In exquisite language, Mr. Shigeta painted a picture of Taoism, an ancient cult dedicated to the adoration of the beautiful. Its tenets teach the eternal community of interests between him who creates and him who enjoys. By leaving on each picture something still unsaid, the painter lures the beholder to enter and share. "Art," said Mr. Shigeta, "would be a universal language if we ourselves were universal in understanding."

Fenwick Small gave an illustrated talk on the use of miniature cameras in special fields, pointing out that they had made portraiture possible under conditions that previously had been considered impossible.

The final paper on the program was by Moholy-Nagy, on the new Chicago Bauhaus and its aim to create a modern theme of design. He followed his paper with an abstract movie of "Things to Come."

The Saturday luncheon was a period of renewing old acquaintances and making new ones, generously overlaid with a thick coating of photographic patter. Sunday's luncheon, the grand finale, started off with excellent food and ended up with no less excellent oratory, and when the last farewells were said, the unanimous feeling was, "We meet again."

The Annual Dinner on Saturday night, with Dr. Max Thorek as a photomontage president, toastmaster, speaker and interlocutor, was held in the Grand Ball Room. Mr. Will Abbot Kelly, president of the Chicago Camera Club, gave the address of welcome. Byron Chatto reported that the Board of Directors had conferred upon Dr. Thorek the distinction of "Honorary Member," the first award so made. Music, vaudeville and a spot of legerdemain rounded out an extremely pleasant evening.

Among Those Present

The dean of the P. S. A., Billy Alcock,

known and loved by everybody.

Roy Franklin Dewey, President of Fort Dearborn Camera Club and Number One Boy of the Convention. Roy was omnipresent, omniscient and nearly omnipotent. Practically out of a hat he produced blackboards, easels, projectors, tables; all with the greatest of ease.

Ann, the other Dewey fraction, did all the fixing and remembering.

Wm. Zerbe, 73 years young, and already getting into high gear for the 1938 convention. "I made my first camera," he boasts, "out of a box, a rubber boot and a pop bottle, and it made pictures that have never been excelled—much."

P. F. Squier, from Pittsburgh, who knows everybody and remembers way back. Specializes in paper negatives and Pittsburgh stogies.

Frank Marshall Moore, Chicago newspaper man, with Leica and flash bulb recorded the foibles of the great and near great. Frank has educated his camera until it practically walks alone.

Rowland Potter, Rochester scientist, and looks it. Trigonometry and parabolic functions are duck soup, and how he loves gamma!

Jimmy O'Hagan, secretary of the convention. Assistant "Ask Me" and the guy who did the heavy work of getting up the program and sending out the letters.

Just Facts

The convention was held under the auspices of the Fort Dearborn Camera Club of Chicago. Attendance at lectures averaged 100. Registered 150. Geographically the visitors were widely scattered, from New York to Los Angeles, Tulsa to Milwaukee. Some 40 clubs were represented.

Zeiss Ikon Exhibition in Washington, D.C.

A Zeiss Ikon Exhibition of Photographs and Enlargements taken with Zeiss Ikon cameras will be held on November 4, 5 and 6 in the Sun Parlor of the Washington Hotel at Washington, D. C. This exhibition has been shown this year in a number of cities and has found many enthusiastic admirers. Now Washington will also have a chance to enjoy the wonderful results achieved with modern Zeiss Ikon cameras.

Weston Retrospective Exhibition

This exhibition, on display at the San

Francisco Museum of Art during all of October, offers San Franciscans a rare treat. Aside from a single exhibition in New York this is the only comprehensive showing of Edward Weston's work in several years. Edward Weston, whose importance as a photographer has recently been emphasized by his being awarded a Guggenheim Fellowship, occupies a unique position in photography. He is the unquestioned leader of one "school" of photography, and he is perhaps the only photographer whose work is generally acclaimed by the foremost critics of our day.

What has been said above is sufficient to indicate the real importance of this exhibition.

The chronological arrangement of the exhibition makes one thing crystal clear. Edward Weston is not standing still, is not resting on his laurels. His work shows a steady, purposeful improvement, both in conception and execution.

The Trophy of the Photographic Society of America

With the double purpose of stimulating interest in photography and rewarding excellent workmanship, the Photographic Society will award a gold medal and diploma to the photographer making the highest record, under the rules explained briefly below, and to the Print of the Year. The prizes are presented through the intelligent generosity of Mr. Edward P. Murtry, a well-known pictorialist, whose residences are in California and Maine and who thus embraces the interests of photographers from coast to coast.

After carefully considering the conditions of exhibition and the records in past years, the committee arrived at rules of award which are scrupulously fair to all.

The Award of Merit to a Photographer.

He must have the highest percentage of acceptance of his prints in at least 10 salons chosen by the Committee. Statistics will be compiled by the Committee but before the final award each contestant will receive his rating and be given time to correct any possible errors.

The Award for the Print of the Year.

The five leading exhibitors at the end of the statistical period (July 1st, 1937 to June 30th, 1938) will be asked to submit 4

prints each, of their own selection, exhibited during the period. Each of the five leaders will then independently rank the prints in order of merit, excepting his own work. The Committee will compile the score and the award will be made to the print receiving the highest rating.

A complete explanation of the rules, including the reasons for their acceptance, has been prepared by the Photographic Society and may be obtained from the Committee Chairman, David R. Craig, 4434 Garfield St., N. W., Washington, D. C.

New Western Magazine

Asks for Photographic Contributions

The Coast. a new western magazine, depicting the colorful parade of far-western life, asks that photographers contribute pictures interpreting the western scene. Pictures of sporting and social events, prominent individuals, and other interesting prints. Editors are Messrs. Innis Bromfield, Edward R. Bosley, Jr., and Christopher Rand and your contributions will receive their earnest attention. Be sure to enclose postage for returns and address The Coast, 130 Bush St., San Francisco, Calif.

New Clubs

Photographic Society of India. The inaugural meeting of this new organization, sponsored by Messrs. A. J. Patel and M. Desai, was held at the Blavatsky Lodge, in Bombay, with Mr. C. R. Gerrard, presiding. This new club, an amalgamation of some of the photographic groups in Bombay, plans to offer its members complete photographic facilities, including darkrooms, a studio, a library and other accessories. The members also plan to make the society the nucleus of a photographic organization which will extend throughout all India. Those interested may communicate with Mr. M. Desai, Honorary Secretary, Photographic Society of India, P. O. Box 5522, Bombay, India.

The Glen Cove Camera Club. On Sept. 28th, this vigorous group held their first meeting with a charter membership of thirty-nine. Officers elected were, George J. Gould, President; Nathan M. Wolpert, Vice-president; and Harry M. Levy, Secretary-Treasurer. Meetings are held at the Glen Cove Neighborhood House on the

second and fourth Tuesdays of the month. Communications should be addressed to Mr. Levy at Box 454, Glen Head, N. Y.

Lenshawks. A novel organization among photographic groups are the Lenshawks, of Buffalo, N. Y., founded early this fall upon the inspiration of Mr. Lester F. Davis, who conceived the idea of a purely social photographic group. The group meets once a month for dinner and a general round table discussion on photography. There are no officers, dues or other obligations and each member acts as host in turn. Membership is limited to twelve, by invitation only, with a present enrollment of nine members. The Lenshawks plan to hold a salon during the coming winter but details are not yet available. Communications regarding this unique group can be addressed to Floyd D. Hale, 292 Chicago St., Buffalo, N. Y.

Ridgewood New Jersey Camera Club.

Formed with twenty-nine charter members, on Sept. 29th, this new club promises to be prominent among the many new organizations mushrooming into life with the spreading interest in photography. Officers elected for the coming term were Lloyd A. Mackenroth, President; Donald Frost, Vice-president; and J. H. Vanderbree, Secretary-Treasurer. Meetings will be held on the second and last Tuesdays of each month. Communications can be addressed to Mr. Mackenroth, 568 Wyndemere Ave., Ridgewood, N. J.

Wheaton Camera Club. Another new group has just been organized in Wheaton, Illinois. At the organization meeting the following officers were elected: David Helmich, President; David Kummer, Vice-president; and Howard Andersen, Secretary-Treasurer. The club will incorporate a group for cinefans, as well as still cameramen. Communications should be addressed to Mr. Andersen, 707 Ellis Ave., Wheaton, Ill.

New Meeting Place for Pictorial Photographers

The Pictorial Photographers of America are now holding their meetings in the Auditorium of the Museum of Science and Industry, R. C. A. Bldg., Rockefeller Center, New York City. This famous club under the leadership of Thomas O. Sheckell, newly elected president, looks forward

to a most successful future. Communications should be addressed to Mr. Emanuel M. Weil, Secretary-Treasurer, 100 Gold St., New York, N. Y.

Leica Exhibit Postponed

The Fourth International Leica Exhibit has been postponed until January 8th to 18th inclusive, of 1938. It will be held on the mezzanine floor of the International Building, Rockefeller Center, New York City. The change in date was made to take advantage of more suitable exhibition

space which was only available at the later date. This gives photographers one more month to prepare their entries as the closing date has been advanced to November 30th. Entries are limited to pictures made with the Leica camera but there is no limit to the number of entries and no entrance fees are charged. Complete data on each print should be written on the back of entries.

Mark your entries "Exhibit" and forward them to E. Leitz, Inc., 730 Fifth Ave., New York City.

Notes and Comments

Agfa Announces New Press Films With Amazing Speed

Incorporating important new developments in emulsion-making technique, two new Agfa films have been announced that provide the photographer with greater film sensitivity than has ever before been available. While improvements in film speed have in the past been gradual, these new films exhibit a sensitivity that is from three to four times greater than present "super" types of photographic film.

This amazing gain in film sensitivity will mean an advantage of $1\frac{1}{2}$ to 2 full lens stops to the photographer—or a permissible shutter speed that is three to four times as fast as that previously necessary. The two new Agfa films which possess this unusual speed, include **Superpan Press** and **Super Plenachrome Press**, two cut films that will be invaluable to the press photographer.

Press photographers will find this extra speed extremely valuable in their work, for in some instances ordinary Mazda light or normal room illumination will be sufficient for pictures. In other cases, small flash bulbs may be used in place of the larger size. The new films will also be a great help for stage photography, candid work, fast exposures under poor light conditions and subjects requiring extreme film sensitivity.

Equal to the magnitude of this improvement in film sensitivity is the remarkable fact that other desirable photographic characteristics like keeping quality, clarity, proper gradation and color sensitivity have

not been affected by the gain in speed.

Of the two new Agfa films, **Superpan Press** offers slightly greater speed, particularly in artificial light. It possesses panchromatic color sensitivity and has somewhat steeper gradation than the orthochromatic film, **Super Plenachrome Press**. Both press films, which will be available in standard sizes, are manufactured by Agfa Ansco Corporation in Binghamton, N. Y.

New Bee Bee Enlarging Easel

Burleigh Brooks takes pleasure in announcing a new Bee Bee Enlarging Easel of all metal construction — a really outstanding value. This easel is extremely well made and should prove a definitely superior aid to precise enlarging performance. Of staunch, all-metal construction, there are no wood parts that might conceivably warp or split. It can be used in conjunction with practically any type of enlarger. Its features include: white surface for focusing, uniquely designed locking devices which insure true and rigid alignment of sliding arms and marginal controls permitting borders up to two inches wide. It is substantially constructed and of pleasing appearance. It comes in the following sizes and prices: 8x10, \$7.00; 11x14, \$8.00; 16x20, \$15.00. For further details, write to Burleigh Brooks, Incorporated, 127 West 42nd St., New York City.

\$50 in Prizes Each Month for Perutz Photographs

Every month Perutz will award a cash prize of \$10 for each of the five best pho-

tographs submitted to them. They are also prepared to purchase any negatives which they consider good enough for publicity purposes.

Obviously, any pictures submitted must be good, both pictorially and technically, and they must have been taken on Perutz film during the six months preceding entry. You may enter at any time, and you may submit as many pictures as you like. Every type of picture is eligible, and particularly good snapshots of river scenes, week-end parties, happy people bathing, sailing, and indulging in every kind of sport and games; children, animals — in short, everything that truly and naturally mirrors life. For further details write the Intercontinental Marketing Co., 10 East 40th St., New York, U. S. representatives for Perutz films.

Engel Art Corners Manufacturing Company Announces New Transparent Corner

A unique, practical, high grade mounting corner which is clear as glass has been developed by the Engel Art Corners Manufacturing Company.

TRANSPARO is a patented corner which may be used to mount snaps, cards, clippings, stamps, etc., tight or loose. If the tips of photo or clippings are moistened on back, it can be slipped into the corner and fastened securely—or, if preferred, the print can be slipped in without moistening and can be removed from the album easily at any time.

The new Engel transparent Mounting Corners are fully protected and controlled by Engel in U. S. A. and Canada. They are marketed under the registered trade mark — "TRANSPARO" — and wherever introduced have made a big hit with photograph and stamp fans. These corners are put up in neat boxettes of 100 to sell at 15 cents. Samples and complete information regarding these new corners may be obtained by addressing the manufacturer — Engel Art Corners Manufacturing Company, 4711 North Clark Street, Chicago, Illinois.

Judges for Kalart Contest

The Kalart Company, New York City, has just announced the three judges of its \$100 Synchro-Sunlight Prize Contest as

previously outlined in Camera Craft. They are: Willard D. Morgan, photographic editor of Life Magazine; Pat Terry, head staff photographer of News-Week Magazine; and John F. Cameron of N. W. Ayer & Son, well-known advertising agency.

Haber & Fink, Inc.

After nearly twenty years association with Abe Cohen's Exchange, Inc., famous New York firm, Messrs. Harry Haber and Harry Fink have established the firm of Haber & Fink, Inc., at 16 Warren St., New York City.



Left, Harry Haber, right, Harry Fink

Haber & Fink, Inc., will supply a complete line of photographic supplies in both the motion picture and still fields. The proprietors' wide experience in this business assures their customers of the most efficient service.

Stanley R. Jordan Opens New San Francisco Studio

Stanley R. Jordan, well known San Francisco photographer, who began his camerawork as a hobby, opened a new portrait studio at 270 Sutter St., San Francisco, on October 9th, 1937.

The opening of this studio marks the end of the story of an amateur whose hobby became his greatest interest and the beginning of another story about a professional whose fine workmanship and artistic excellence assures him of success in his chosen field.

This writer can think of no one who has studied his subject with more competent thoroughness than Mr. Jordan and coupled with his natural talent it makes for a combination that will produce photographs of which the profession may be proud. Mr. Jordan long ago became interested in ap-

plying the technique developed by the motion picture profession to portrait photography and since that time has studied this technique thoroughly. To obtain the best instruction in make-up available, he studied this work under Max Factor, of Hollywood. With the same completeness, other phases of the subject were studied under the most competent instructors.

For the past four years, Mr. Jordan has had a fine studio in his home in which he pursued his experiments and perfected his technique. With lights of his own design and construction, which have now been perfected for use in his new studio, he produced a series of fine pictures which have been shown in the principal cities of the U. S.

Mr. Jordan's new studio, at 270 Sutter St., enjoys the benefits of his experience. Modern in design and layout, it emphasizes convenience and privacy to patrons and efficiency of workmanship. Features are the striking reception room, completely finished in white, and tastefully decorated in the modern manner, and the Panchromatic make-up room, where Mr. Jordan will utilize the latest make-up technique.

We, of Camera Craft, wish Mr. Jordan every success with his studio, as do his many friends in San Francisco.

Our Cover Illustration

Our cover illustration this month is taken from one of the subjects which will appear in "The Works of Rudolf Koppitz," a book shortly to be published by Die Galerie, of Vienna, Austria. This is the third volume in a series of publications each of which is devoted exclusively to the works of one outstanding photographer. The first two volumes covered the work of Leonard Misonne, and Alexander Keighley.

Rudolf Koppitz' work is universally accepted as representing the highest attainments of artistic photography, and it seems particularly fitting that this volume should appear as a fitting memorial of his work, only a short time after his death, which occurred in July, 1936.

The illustrations are in large size and of superb quality, and the book is priced at \$4.00. Only a limited edition is available, so orders should be placed with the Ameri-

can Photographic Publishing Co., 353 Newbury St., Boston, Mass., as promptly as possible.

Correction

Due to an error in listing the picture which appeared on page 373 of the August issue of Camera Craft was credited to Ferenc Csik. Actually this fine picture is the work of Slavko Smolej, of Ljubljana, Jugoslavia, and the correct title of the picture is "My Country." Camera Craft apologizes to all concerned for this unfortunate mistake.

Mr. Behrendt Visits San Francisco

Mr. Berthold C. Behrendt, President of the Intercontinental Marketing Corp., whose famous Robot Camera takes sequence pictures with machine-gun speed, recently visited San Francisco, while touring the West Coast.

Mr. Behrendt's enjoyable and interesting visit brought news of interest to the many Robot users. A photoflash synchronizing speedgun, of popular make, is now available for use with the Robot.

An extraordinary type of speed gun is now being developed which will hold 6 to 10 flash bulbs, permitting the operator to make sequence flash shots in rapid succession. An announcement will appear as soon as this is ready for distribution.

For further details regarding the flash synchronizer for the Robot, write the Intercontinental Marketing Corp., 10 East 40th St., New York, N. Y.

The Omega Enlarger

Simmon Bros., manufacturers of the Simmon Complete Enlarger, Automatic Time Switch and Automatic Film Drier, present the OMEGA ENLARGER. The The Omega's rigid construction and perfect counter-balancing insures the operator against vibration and the long focusing lever makes accurate focusing quick and easy. The Omega includes a dust-proof negative holder that eliminates the necessity of glass pressure plates and its double condenser illuminating system permits the use of a standard voltage bulb for cool, short exposures on slow papers. It also features exchangeable lenses of 2" to 3" focal lengths and both Leica and Contax lenses may be fitted to the enlarger.

The Omega is priced at \$65.00 without

lens and is supplied with a variety of lens equipment. See it at your dealer's or write for an illustrated folder to Simmon Bros., 29-46 Northern Blvd., Long Island City, N. Y.

Victor Fotoflood and Fotoflash Units

The value of photoflood and photoflash lamps is too well known to bear repeating but these lamps are only wasted energy without the directing influence of a good reflector. The Victor Fotoflash Holders and Fotoflood Units are made of spun aluminum and are scientifically designed to give the lamps their maximum efficiency. There is a Victor unit of correct size and design for every size of photoflash or photoflood lamp.

See the Victor Units at your dealer's or write for a descriptive folder to James H. Smith & Sons Corp., 11 Lake St., Griffith, Ind.

Two New Agfa Publications Ready

Among recent publications by Agfa Ansco Corporation of Binghamton, New York are two which will be of interest to many amateur photographers. One is a booklet of over forty formulas for photographic use—including developers, fixers, intensifiers, reducers, desensitizers, and toners. Also included as part of this free booklet is a practical discussion of the principles of chemistry that are important to the photographer.

The other publication is a 32-page catalog of Agfa materials for amateur use, listing and describing the cameras, accessories, films, papers, and chemicals manufactured by Agfa Ansco. Both the formula book and catalog 56A are available without charge at photographic dealers or may be obtained by writing Agfa Ansco Corporation, Binghamton, New York.

Western Movie Supply Co.

The Western Movie Supply Co., of San Francisco, are the West Coast Distributors for a large number of nationally known products. Most prominent among these items are:

- Wesco Tripods
- Wesco Film Splicer & Editing Outfits.
- Primarflex Cameras
- Beier Cameras

- Curt Bezzin Primar Plan
- Infinol Fine Grain Developer
- Leudi Meters
- Marks Polarization Filters.

For complete details on any of the above equipment write the Western Movie Supply Co., 254 Sutter St., San Francisco, California.

Eastman Kodak Company Announces New Field Case For Kodak Bantam Special

Users of Kodak Bantam Specials who wish to give the camera the protection of a case yet have it ready for immediate use, will welcome a new "open-front" field case that permits quick operation.



The case is made in two sections—a skeleton inner shell that holds the camera horizontally in picture-making position and a folding outer shell that drops down hinge-fashion, out of the lens field. The outer shell fastens to the inner with five glove-snaps and can be taken off entirely if the user wishes.

Construction is of fine tan "bridle" leather. Neck strap rings are placed at the upper corners of the inner shell, which is lined with velveteen and fits the camera body snugly. A spring-steel frame behind the velveteen lining gives added safety grip but allows quick removal of the camera for re-loading. A cut-out at the back gives ready access to the sliding film window cover. The case retails at \$8.50.



Winter, Inc.

The accompanying illustration describes the establishment of Los Angeles' newest photographic store, Winter, Inc., of 529 West 6th St., Los Angeles, Calif., better than any words can depict it. Thoroughly modern in design and completely equipped this enterprising firm offers its customers an unusually high standard of service.

See-Sharp Focusing Device

The R. P. Cargile Co. presents a handy, efficient little instrument, called the See-Sharp Focusing Device, which is an ingenious arrangement of mirrors and a magnifying glass. When the See-Sharp is placed upon the enlarging surface, it magnifies a portion of the projected image and renders this portion bright and clear so that a sharp, accurate focus is simply and easily obtained. The See-Sharp is small and easy to use and may be kept easily in the operator's vest pocket when not in use. For complete details, write R. P. Cargile, 118 Liberty St., New York, N. Y.

The Camera-Mart, Inc.

Irving Browning, noted illustrative and advertising photographer, formed The Camera-Mart, Inc., 110 West 40th St., New York City, with his brother, Sam Browning, who is also a photographer.

The Camera-Mart, Inc., will offer complete photographic service in the movie and still camera fields. Irving Browning will not be actively engaged in this enterprise, as he will continue his work in the advertising field, but he will act in an advisory capacity and his knowledge of sixteen years in photography will be available to the firm's customers.

First Surface Mirrors for Graflex Cameras

Graflex cameras are now being equipped with first surface mirrors as a further Graflex aid to perfect focusing. This type of mirror differs from the usual type in that the reflective coating is placed on its front surface rather than on the back. Thus, the light received through the lens does not have to pass through a layer of glass before being reflected up to the ground glass. This gives a much brighter image on the ground glass and eliminates the "double images" and undesirable reflections sometimes found troublesome when focusing on a strongly highlighted subject.

First surface mirrors of the new type are available to all owners of current series Graflex cameras through Graflex dealers. Prices are reported to be nominal.

Free Speedgun Exposure Slide Scale

The film of S. Mendelsohn, manufacturers of the Speedguns, are offering a Speedgun Exposure Slide Scale free upon request. Just mention the kind of photoflash synchronizer you are now using and the Scale will be forwarded immediately. The Scale is of handy pocket size and is based upon the experience of press photographers and tests conducted by S. Mendelsohn. The exposures of the Scale assume that some strong press developer, such as D-72, 1 to 2 parts water will be used for cut films or plates, and Champlin No. 15 for 35mm. films. Write S. Mendelsohn, 202 East 44th St., New York, N. Y.

Dufaycolor

Dufaycolor makes the taking of color as simple as making black and white pictures. It is now supplied in roll film in sizes to fit every camera and is also available in cut film sizes for standard studio and portable camera equipment.

The exposed films are developed free of charge in the Dufaycolor Laboratories. A mailing packet is included with the film. Those who prefer to process, their own films can learn to do so very easily, since the process is not at all complicated.

See this remarkable color film at your dealer's or write Dufaycolor, Inc., 30 Rockefeller Plaza, New York City, for further details.

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CAMERA CRAFT



Cohn-Trubov

4th International Leica Exhibit

December 1937		PRICE 25c
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PRINTS FROM KODACHROME		Jack V. Wood
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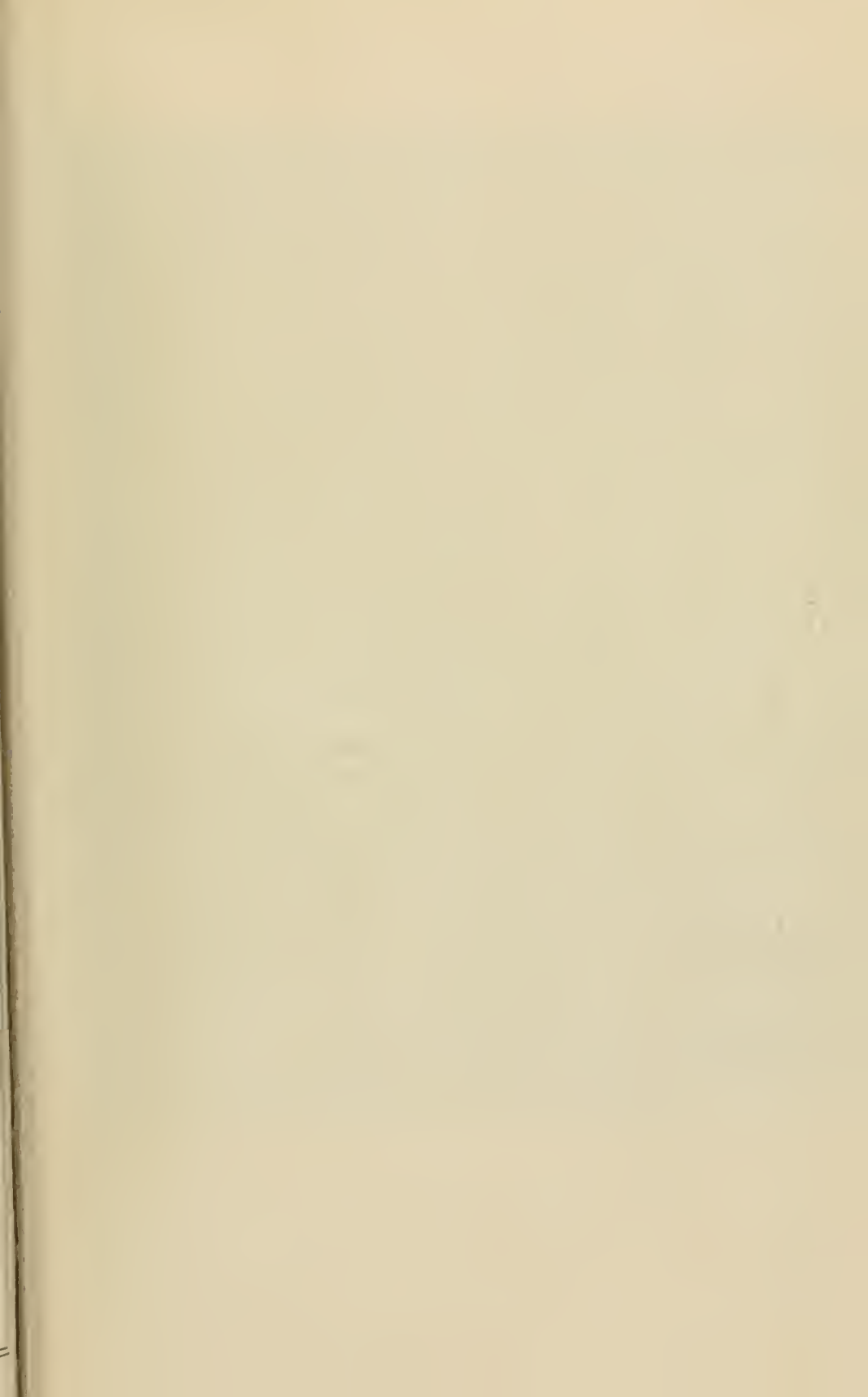
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"Joshua Tree, Mojave Desert"

Edward Weston

Racicot - - A True Modern In Portraiture

Nicholas Haz

WHAT is portraiture?
What is a modern?
What is a true modern?

To ask a question is not to answer it, though we find many today who pretend that is all there is to it.

Not long ago I read a title "Portrait of a Coffee Industry". That is hard to swallow, as I like words to be used with clarity of meaning. Are we building a tower of Babel and using words to confuse?

Long usage has established the true meaning of the word "portrait". It definitely means a picture of an individual. The dictionary says "a likeness". So we have it in simple homely words, "a likeness of an individual". Let's keep it that way, and we can get somewhere with it.

For a moment let us consider the word "modern" when speaking of painting. After a great spree of ballyhoo has simmered down, we find the sober heads digging up El Greco, and so he's a modern too. Of course the present-day moderns have new clothes, and they have adapted their ideas to a far greater range than was done in the days of El Greco—but there is no quarrel with El Greco, his work was sound.

Now let us go back to photography.

About 1843, when photography was so young it had not yet cut its first teeth, a Scotsman, David Octavius Hill, gave us a collection of portraits that are so fine that we fetch him back after nearly a hundred years and place him at the top along with the best moderns of today. You see, photography also has its own El Greco—a modern who lived and worked long ago, but whose work lives today to show us that there are some eternal qualities that are essential in any age.



"Beniamino Bufano"

Arthur Racicot



"Peter Stackpole"

Arthur Racicot

Now, what makes D. O. Hill a modern? In the first place, he made his portraits by unadulterated photography. He was a painter by profession long before he photographed, but he recognized clearly that photography was definitely not a medium of the brush or pencil, and that a horse could not be made a better horse by making it a mule. Today, this is recognized, but through the years when pictorialism was on top, this elemental truth has been obscured. So the moderns have rediscovered that you cannot make a photograph a better photograph by making it look like an etching or something else.

The moderns today have so much more to work with, better lenses, better films, etc., than was available in D. O. Hill's time, but the fundamentals are the same. We simply have a wider range in application. The development of portrait photography as an art was seriously halted for many years, during which it was practiced almost entirely as a trade—in which the foibles and vanities of the customer with cash has been almost entirely the guiding hand. This has been increasingly so in recent years with the portrait studio trade. Perhaps no group of photographers today show less aptitude for improvement than the professional portrait studios. In this they should not be held solely to blame. Their primary motive is to sell photographs and the buyers, of course, have the last word, but the results, of course, are just doughnuts at so much per dozen. So we find nothing of particular interest in the "doughnut" trade. They are busy people just making money, or trying to make money—that's all.

I mention here the portrait studio trade, because too often it is taken to be representative of the best efforts in portraiture with the camera. The trade is a trade. Its purpose is to manufacture a trade article, and usually the process is divided into several successive operations performed by several individuals with different degrees of skill. This condition prescribes a standard product—quantity, cheapness, and leaves little or no room wherein to find portraiture as a fine art. We must look outside the trade to find photography used properly as a medium of art expression. The artist is he who discovers and reveals to us, through his workmanship, those things that move others to feel the same emotions that controlled him as the maker.

In portraiture, the subject, his personality so far as can be revealed through the eye, must be the starting point, and attributes must have their origin in the subject. To select from one's own fancy, or purpose, a set of attributes and clothe Bill Jones without regard for authenticity is to present a fraud. It may be pleasing to do so, but it remains a fraud just the same. So a modern portrait is authentic.

Here I invite your attention to that perverse contrast which seems to have always plagued *homo sapiens*, yes, even as early as Adam and Eve, and that is the difference between propaganda and truth. Propaganda may or may not be allied with truth—its effort is to influence something. Truth makes no effort, its strength lies within itself. The individual's approach to a portrait of himself is, very, very often, that of the propagandist. His reaction is very largely dependent on what others think about it, so he is immensely concerned with his portrait conveying to others what he wants them to believe about him. This frame of mind, so frequent



"Bond Ward"

Arthur Racicot

on the part of the subject, is probably the toughest obstacle to the making of an authentic portrait. An obstacle that must always be surmounted before a really fine portrait is made. The present vogue of candid photography is believed by some to be a solution to this difficulty, but one can hardly call such "wing-shooting" good portraiture.

To support my contention that truth in portraiture is more valuable than flattery (propaganda), think this one over. Do you prefer a false to a true friend? Does it make any difference if his head is bald, his nose red, or a mole on his right temple, if you know him as a true friend? If you do not know him, would you prefer to have his portrait fool you or would you prefer an honest one?

After all, truth is not ugly.

With few exceptions, there is always enough about a man to make a good honest portrait, any man who has a single friend can be made to do. The artist selects, and in this selection, he determines his values.

As modern photography is recognized as an art medium quite sufficient to be itself—it is not true to itself when it attempts to parade under the cloak of other methods of picture making, and in portraiture it offers certain advantages. These are lost when the process is degraded by manual applications that actually modify the "optic" quality of the print. These manipulations are all the result of defective technique, befuddled conception, or both.

D. O. Hill recognized this clearly, though he was an experienced painter before he took up photography, and despite the very limited materials available in 1843, he gave us his superb portraits in straight photography—no pencil nor brush work—photography alone was adequate. And it is today in the hands of competent photographers.

I have recently seen the work of Arthur Racicot of San Francisco, and he is so clearly an exponent of the true modern in portraiture, and many of his portrait prints are such forceful characterizations, that I felt the urge to write this article.

One of the most impressive of the rare idealists I have known. Born in Lowell, Mass., which also is the birthplace of Whistler, he early made up his mind to follow a military career, as did Whistler. Unlike the great painter, he did stick it out and was commissioned a lieutenant of Marines at twenty-one. In due time he became a colonel of the Marines. Now he is retired and consecrates all his time to photography, which, during his days in the service was his favorite hobby. His advent into photography was gradual, however. First paintings and music interested him, then in Japan and other Oriental countries he took up the study of woodcuts, ceramics and the other branches of the Arts and Crafts, just as an appreciation rather than performance. In the days of the Photo Secession his interest turned definitely to photography, with which he has stayed ever since.

He was always interested in the character of men. His specialty as a Marine officer was to develop character in his soldiers. No wonder that he was so much attracted to portraiture, when the time came to select another profession. Honest, straightforward truth in the description of the mind, and appearance of the sitter is the idea of his work. To do this



"Colonel C. F. Williams"

Arthur Racicot

he has built himself an excellent technique. Straight photography all the way through, no control beyond light and chemicals, certainly no admixture of handwork and no finishing to ape etchings, lithographs or the reproduction of paintings. He prefers heads and shoulders, but if this is not sufficient to tell the story he will add more of the figure.

He knows the extreme importance of logical composition and there is not a book on the subject he does not possess or did not read. He tells me he has learned from these books that one cannot learn much from books, but that one must read the books to find this out. His logic has prevented him from becoming a dogmatist and his instinct has led him most of the time to excellent composition. Of the several aspects of composition of pictures he favors plasticity, definition, good but not exaggerated textures; all this through keenly calculated lighting.

The two portraits of Beniamino Bufano, the famed San Francisco sculptor, show his power of characterization and good technique. Bufano is a highly talented, energetic, powerful fighter of a sculptor, who follows his own nose, and does not care who does not agree with him. His battles about the fitness or quality of his art are known all over the country. The eyes directed away seem to show what Mr. Bufano thinks of your opinion of him and his work; his straight set lips testify to an unbending will and steely determination to finish what he started. A dandy portrait.

The other picture shows him at work, and is well calculated to raise respect for Bufano and his work, but not through the usual syrupy flattery.

The light, vertically from above, shows severity, almost fanaticism in the face. Powerful hands, emphasized, show that the fellow has brawn to follow his brains. There are sufficient accessories to clarify the idea of the picture. The two pictures together explain, better than a book could, who Bufano is, and why he is the Epstein of San Francisco.

Bond Ward. A fine plastic study. The collar almost steals the spotlight, at least at first glimpse so it seems. But the profile is so fascinating that even this clearcut, simple geometrically regular shape cannot defeat it. I would like to see a similar portrait of George Washington, to me it would be better than any painting by anyone done of him.

C. F. Williams, Colonel of the Marines; one could almost guess the name and rank, looking at this portrait. Photographs of this sort can be dignified with the word "document". Not a record, a mere description of what one looked like at a given time and a certain place during the second of exposure, but a certificate of integrity, courage, strength, and intelligence *through life*. This portrait shows duration, suggests the entire middle age of the Colonel. An authentic portrait.

Peter Stackpole's portrait explains why this young man made such a sudden success in journalistic photography. Imagination, yet plenty of energy. Here is the portrait of a young man who is bound to rise far in his chosen profession. At least this is what Colonel Racicot says with this portrait without adding or taking away from what he had before his camera. Colonel Racicot ought to be commissioned as official photographer to the nation. History is better served by such portraits.



"Beniamino Bufano"

Arthur Racicot

Members For Your Club

John Steinke

YOUR CLUB is naturally interested in reaching new prospects; so here is a plan which will bring the kind of members you want. In spring and fall, at the time of new camera interest, give short courses free to the public. A spring course on beginning photography, and a fall course suggesting winter camera uses.

Plan your courses as later suggested, and have someone get busy at the publicity. This should be placed in newspapers, of course, and do not neglect the special columns, such as the art and women's pages. Counter and bulletin board cards are most effective. The library is one of our best spots. Here is copy we found effective:

GET THE MOST OUT OF YOUR CAMERA

Learn How

FREE SHORT COURSE

Every Friday Night in April

CAMERA GUILD

4618 Euclid Avenue

Which is the best camera? - How to take pictures

Developing, Printing, Enlarging

A CLUB FOR MEN AND WOMEN

Publicity should be out from two weeks to ten days before the opening night. With your publicity committee on the job, the course committee has been busy filling in the details as suggested by the accompanying outline, and assigning demonstrators. The course is planned to cover four evenings. When there is a fifth, put on a special demonstration showing advanced work which will indicate the possibilities of photography. Each evening's program consists of two periods. The first starts at 8:15 and is used to give the technical explanation of the evening's



Laurence Peters

4th International Leica Exhibit

subject. Then a rest period of about ten minutes, which we found keeps the evening livelier. The second period is devoted to the demonstration. It might be noted, that while we present beginning courses, they are paced for an adult group of above average education. This is very frankly done for a purpose. Our club is devoted to an adult group, and as our courses are intended to bring such members, the tendency is to weed out those, who find our presentations too difficult.

The spring course is aimed at those who are considering a new camera. It is not as productive of applications as the fall course, but it is a partial feeder for the fall series, and any who attend both courses usually become members. The following suggestive outline is interspersed with what you should do about getting your students interested in your club. The opening night arrives, your greeting committee seats the visitors, takes care of wraps, passes out magazines, all of which makes them feel really welcome. More than words of greeting can express.

Announcements are made in the second period so the late comers do not miss them. So the first night, after a formal greeting, we plunge into our subject matter. Now it would seem natural to start with the camera, and work toward enlarging, but experience seems to indicate, that, much more can be put across, if printing is taught first and lastly the camera. So

the first meeting is given to an explanation of simple printing. A very slight description is given as to how silver salts are effected by light, so they can be developed. How paper, as well as film, is effected in this manner. Then it is a good stunt to pass around a series of five negative contrasts. Also thin, medium and dense negatives. Suggest that if they will bring in five selected negatives in marked envelopes, you will help correct them in their choice of negative contrasts. Do not attempt to go into detail as to what each chemical does in the developer, but suggest some standard developer that is available ready to mix. Give an account of the order in which the work proceeds, caution regarding the hypo, explain washing, and drying methods. About this time hold recess. This first talk should not exceed forty minutes. During recess show your visitors about your quarters.

Call the group together again, and make your announcements. Make the frank statement that the course is put on for publicity purposes, but rather than talk too much concerning the club, explain that you feel, as they become acquainted they will learn more concerning the organization than any long spiel might give them.

With such a brief explanation, plunge into the demonstration which will show, in practice, what was first discussed in theory. In this way, you first explain, and then do. This method gives two explanations, and the chance of being understood is very high. At the end, bid your visitors good-evening, and express the hope you have aroused their interest enough, so they will return the following week, when they will be shown how to make enlargements.

Have your greeters on the job again the second evening, (and all other evenings), and promptly start the first portion of the evening's work, the explanation of enlarging. Tie in with the previous demonstration as much as possible. After the word-picture explanation call recess, and invite their attention to the enlarger. After recess make your announcements. Beg the indulgence of those present the first time, as you again explain the courses as a publicity stunt, that there is no catch to the course. That no effort would be made to sell further courses. (Maybe your town has not been overrun with schemes, and this may not be necessary, but it is quite important in our city, where free courses, are used to sell high-priced follow-up courses.) You can explain further, that as they become acquainted with you, and you with them, that if they discover they wish to continue photography, you are sure the desire for membership will just naturally grow. These courses have the advantage of making it possible for you to become acquainted with your prospective member, which is better than all the recommendations which may accompany the application. And, somehow, the problem of turning down those, who just don't fit into the organization seems to solve itself. Do not accept applications during the first two weeks, so the curious are eliminated, in the end you will have the applications of those who will fit into your organization. Following the membership announcement, you proceed to the practical demonstration of enlarging.

The third time is for developing. You will discover that this apparently mysterious thing called negative development is a little easier



Charles B. Frazier

4th International Leica Exhibit

explained by referring to the two previous demonstrations on printing and enlarging. Again the mind is prepared during the first half for the demonstrations of the second half. Give a standard developing method. Announcements are made again at the start of the second half. Here you may be permitted a little longer talk. Your visitors by now, have become sufficiently acquainted with you, so you can tell them about your club and its policy. Our experience may interest you. We are working toward a medium-sized organization with a top limit. Our aim is to grow in quality, rather than to have the largest club in the world. Maybe the depression has taught us a thing or two. Americans always had to have the biggest of everything, including depressions. Why be the biggest? Why not aim at a congenial bunch, who like to get together to talk photography? Why try to be bigger than the other fellow? We are satisfied to be ourselves, to know that in the other end of town is another group, and we don't want to be bigger than they. We serve a purpose to our group, and they to theirs, and our ego isn't troubled a bit by the knowledge that we are not the biggest club in the world. We have a whale of a good time enjoying photography; we try to be an oasis of a little peace in these nerve-wracking times, and we are glad to know that there are other clubs in town, out of town, and even out of the country.

Now for the fourth and last night. This is different in that all the evening is devoted to explanation. The first half deals with cameras, and lens, and the second with emulsion, filter, and exposure explanation. This time give your club talk at the end of the first half, make it brief and a summary of the other talks, and above all be honest. We had, little more than four bare walls, but by honestly stating our aims, the lack of equipment did not deter people from joining, despite the fact that there was an organization available, with rooms full of equipment, a long list of lecturers, and a school. We told our students of all the available camera clubs in the city. Yet our policy of an intimate type of organization was the convincing factor in almost every instance. When you have made your explanation you can state that those who wish applications can have them, but that the others need not feel they will be high-pressured in any way. There is every reason to believe, that, if you put on a series of good demonstrations, and were kind and thoughtful, you will receive a high percentage of applications at this meeting. The balance of the evening is finished with the talk in regard to films, etc.

Now the fall program differs from the spring program, in that instead of reaching for those attempting photography for the first time, it strives to reach those who have been using a camera. The publicity is much the same as for the spring course, but different copy was used for the card.

DON'T PUT YOUR CAMERA ON THE SHELF

Learn About Fascinating
FALL AND WINTER PHOTOGRAPHY

Portraiture - Still-Life
Night and Snow Pictures - Christmas Cards

A FREE COURSE
EVERY FRIDAY NIGHT IN
OCTOBER

CAMERA GUILD
4618 Euclid Avenue

A Club For Men and Women

In the fall program, as can be seen, we attempt to teach new camera interests particularly suited to fall and winter photography. The general set-up is the same, so the part of the program devoted to interesting prospective members is similar to the spring program and need not be repeated. The first evening is devoted to simple portraiture. The tools, lens, film, etc. are explained in the first half, while the second half is devoted to a demonstration of a simple front light, a dramatic light, and a simple profile.

The second session is devoted to night and snow pictures. This is a difficult subject to handle interestingly, without going on field trips, which when the groups are large aren't likely to be interesting either. So, during the first half, problems peculiar to the subject are discussed, while the second half we attempt the second best thing to an actual demonstration. We put up pictures, and give an explanation as to how they were made. As the entire evening is devoted to lecture it is kept short. This is always advisable in lectures, demonstrations can run longer.



Cohn-Trubov

4th International Leica Exhibit

The third evening is devoted to still-life photography handled as the other subjects. A still life is set up and lighted in the second half. All three demonstrations form good preparation for the fourth night, which is devoted to Christmas Cards. The first portion is given to an explanation of cards, to various styles, and suggestions as to how to design photographic cards. Sepia and uranium toning is demonstrated in the second half, and the evening closes with a short demonstration of copy work. It all makes for an interesting series, and regular presentations of such courses are bound to keep your membership up to par with the kind of members you want.

So much for what we have done, but how about the actual results of this program? Below are actual figures of the attendance at these courses and the number of new members actually obtained through them. Notice that as we became more skillful at publicizing and conducting the courses, the response to them increased greatly. Consequently a club should not become discouraged if their first attempt at such a program is not entirely successful.

The Camera Guild was organized, obtained club rooms and held its first meeting in October, 1935, with an original membership of fifteen.

The first school was held that year in November. It was poorly

organized and publicized and had a total attendance of six which resulted in one application. The following spring course was better publicized and we had an initial attendance of about fifteen but we made the mistake of being too technical the first night (we got into a discussion of panchromatic and orthochromatic emulsions), and it resulted in an attendance drop to eight, and this, with some newer additions, was the attendance for the rest of the month. It resulted, however, in three applications.

We then held the fall course knowing more about publicizing and how to present our subjects, with the result that with one extra favorable bit of newspaper publicity we had an initial attendance of thirty in the fall course. We now presented our material simply and held the attendance, so that at the end of the month we had an average attendance of eighteen, and, upon request, repeated the spring course, which made it a two-month school. During that period we obtained twelve applications.

As our membership is nearly filled we failed to put our efforts into publicity this spring, so our ordinary announcements resulted in an average attendance of twelve, with the exception of one evening when a WPA class attended, which brought the attendance for that night up to thirty. From the course we have secured four applications, turned away about six as being too young, and have reason to believe we will secure four additional desirable members as a result of this year's spring course. This relatively high return, in relation to attendance, I believe is due to the fact that we are becoming established and known as a club, whereas the earlier applicants were taking the chance that we were a stable organization.

The fall, 1937 series, "Don't Put Your Camera On the Shelf," has been remarkably successful. We were able to put out just a little more publicity and the result, with two nights yet to go at this writing, is over a hundred registered. As our club membership is already nearly at its limit of one hundred, we were at our wits end. Rather than present our story to the entire group, we held a separate meeting and about thirty-five stayed and we took in twenty-five applications for membership, and more want to give it just a little thought.

We had mailed invitations to other clubs to send representatives who might talk to the group, but, unfortunately, they did not respond. We believe we could fill every club in Cleveland from this group.

We will be able to take in about twelve to fifteen of the applicants and this with a few other advanced workers still pending will close the membership of Camera Guild. The rest go on a waiting list. Now, just two years old, our rooms now completed, we are sure we serve as a model type organization.

Much—but, of course, not all—is due to these free short spring and fall courses, which are just enough to whet the interest.

It is also interesting to note that the success of these courses has had an important psychological effect on our members. It seems to make them feel that they belong to a club that knows how to do things.



Edw. Schaeffer

4th International Leica Exhibit

Monochrome Prints From Kodachrome Positives

Jack V. Wood

ALTHOUGH a long-time Graflex user for sport work, it was just last Christmas I got into the minicam field through the addition of a Bantam Special. Since that time I have listened to "grain arguments" until I wasn't sure whether it was photography or the agricultural situation. But that still wasn't how I went over to Kodachrome; it was simply that I had a nice Kodachrome shot that I could not take over in monochrome, so it was a matter of devising a method or doing without.

This is an article by a dub; maybe the subject is even old, I don't know, but I've never seen anything on it before, so here goes, and remember, while I've taken many pictures that satisfy myself, I've never exhibited, never won a prize, never done anything, so the vast army of experts may stop reading at this point and turn to the next article.

The process is quite simple. After dilligently cleaning the Kodachrome positive and blaming any remaining blemishes on the processor, the positive is placed in your enlarger just the same as an ordinary negative. You have the same access to cropping and other methods of projection control that exists with a regular negative.

The enlarged image, the positive color picture, is then projected on a panchromatic film to form the monochrome negative. I used 8x10 Defender X-F Panchromatic cut-film, and with my Kodak Miniature Enlarger at maximum gave the film a five-second exposure, developing in Agfa fine grain No. 17 for fifteen minutes. Naturally the exposure time is going to vary with the density and type of Kodachrome positive used. I used film test strips to get the proper exposure. I found that the process will tend to work "flat", and in order to obtain a normal rendition, it is best to work your various steps with an idea to the contrast side. Working for contrast, your negative will probably come out normal, unless contrast is carried too far.

This 8x10 monochrome negative was then placed in a printing frame and contact prints made from it. In the example shown I used Apex papers giving a ten-second exposure $2\frac{1}{2}$ feet away from a sixty watt frosted light. Again this exposure time is going to vary with conditions, so use test strips to determine the results you are working for. Still working for contrast, I developed the paper in D-73 diluted 1:1 instead of the recommended 1:2, and the results were very satisfactory to me and all others concerned, although judgment has never been passed by one of the vast army of experts.

It is obvious that the exposing of the panchromatic film must be in



*Black and White Print
from Kodachrome Positive*

total darkness, but this is easy for anyone used to filling cut-film holders or handling panchromatic at all, for that matter. In the example shown, the background was cut out by the very simple method of cutting it out with an engraving knife while the film was under a half inch of water and placed on a glass plate. If you use glass developing trays this will work admirably as the tray allows light through from below, making it easy to work around the edges of the figure. If you try this cutting business, practice on a few useless negatives first, and be careful!

The advantages are obvious. Two things the big camera boys are always baiting the minicams about: First is our old grain. Well, Kodachrome has no grain, can't possibly have, and the big monochrome negative is certainly out of the miniature class, so the "grain situation" is cleaned up, once and for all. Second, the Big Bertha's claim the minicams have no chance to retouch their negatives. Well, that argument is "Gone With the Wind" also, for the monochrome negative can be any size. I made an 11x14 that could be retouched with a crowbar. So, if you take to the Kodachrome-monochrome negative process, the big boys can't horse-laugh you on either of those old stock arguments. And as for projection control, the latitude to "fiddle around" is enormous.

Now that I'm used to the routine, I find the Kodachrome-Monochrome negative method little more trouble than the old monochrome plus enlarging. And besides, isn't darkroom work at least half of the hobby? I think so. From now on I'm killing two birds with one shot, a beautiful color transparency plus the monochrome print, plus big camera negative versatility, plus minicam convenience. What more do you want?

(The Eastman Kodak Stores, as well as most up-to-date finishers will make black and white prints from Kodachrome positives for those who do not wish to do the work themselves. Such prints can be had from either 35 mm. still shots or from single frames of 16 mm. Kodachrome motion picture film. In general the cost will be the ordinary charge for a black and white print in the size ordered plus \$.75 for making the negative.—Ed.)

Figurines As Teachers

William S. Davis

Part II. Backgrounds

WE HAVE all seen instances uncounted where an unsuitable background has played hob with an otherwise good photograph. Beginners, especially, are liable to concentrate so intently upon what they regard as the subject of their choice that they fail to realize whatever material fills the background must, for good or for ill, also become an integral portion of the composition. And even workers possessing some amount of experience sometimes under-estimate the possible power of the background in determining the character of the finished picture.

Much practical knowledge may be gained concerning the effect of different backgrounds in compositions where figures and still-life material are the main features by experimenting with a figurine as model, and a few sheets of mounting-stock, or other suitable material, of different shades.



Fig. 1



Fig. 2 •



Fig. 3



Fig. 4

to serve as backgrounds. With such simple material to work with it is easy to observe the varied relationship that can exist between the background and model.

A plain background exerts its action through the effect of tonal contrasts and harmonies, emphasizing or subduing, as the case may be, certain tones in whatever object is placed before it, and also helping to fix the general tonal key of the finished picture. In the case of a natural background or a surface showing some pattern, the linear shapes of the details also react upon the outlines of the object and affect the structural character of the composition as a whole.

The illustrations numbered 1 to 4 demonstrate in the simplest manner the action of plain backgrounds, from light to dark. The model in this series was a 12-inch ivory-toned cast of a figure of Borgeson, placed on a stand where it would receive side illumination from a North window covered with a single layer of cheese-cloth, the idea being to so light the figurine as to present its contours in broadly modeled masses of light and shadow. The same technical treatment was adopted throughout to insure a uniform scale of contrast. In consequence, differences in effect are due wholly to the backgrounds employed.

Number 1 was made with a sheet of smooth white cardboard as background, this being so placed as to receive direct illumination from the window. In the print, however, the background is a little removed from pure white, as is usually the case when diffused lighting is employed. At a glance, it is obvious that the shadows in the model, together with the outlines of the dark portions, are greatly accentuated, while the light portions almost merge with the background. In connection with the latter there is a point worth noting, namely: that while the local tint of the figurine is a trifle



Fig. 5



Fig. 6

darker than the surface of the background, yet the *highlights* on the figurine are shown in the picture as lighter than the background. This is accounted for by the fact that the portion of a rounded surface directly toward the observer reflects more light to the eye than does a flat surface of similar character. In either case, however, a smooth surface will reflect more light than a rough one, with corresponding difference in tonal rendering.

Number 2 shows a background of light gray mounting-stock, placed in a position to receive full illumination. Since the background is intermediate in tone between the light and dark portions, respectively, of the figurine, these parts, together with the complete outlines, are brought out with equal force. Whether it is desirable to have all parts equally well defined is a personal problem in rendition, with which we are not here concerned.

Number 3 shows a background very closely related in tone to the dark portions of the figurine, thus placing marked accent upon the fully lighted areas at the expense of the shadows. The same background was used as in Number 2, the deeper tone being secured by turning the face of the background *away from the source of light*. Perhaps it is not generally realized how many gradations of tone can be secured with a single background by merely setting it at different angles to the light-source. Changes can also be effected, either generally or locally, by interposing screens between the light and the background, a particularly practical method when artificial illuminants are employed. If a flexible ground is suspended a little way in front of a wall, very subtle graded effects are obtainable by drawing the lower corners backward or forward to impart convexity or concavity to the surface.

Number 4 presents the model against a black cloth background, the

latter being made to appear as intense as possible by keeping its surface in shadow. The contrast with the light areas is here extreme, and even the darkest areas in the figure are lighter in tone than the background.

Number 5 shows a measure of decorative effect attained by means of a background containing two harmoniously related tones, and masses showing simple outlines designed to accentuate the flowing curves in the figure. A sheet of pale gray stock formed the foundation, to which was attached the arched cut-out of darker paper.

Number 6 is simply an example of what *not* to do, though typical of what frequently *is* done! The distracting mixture of shapes and spotty tones is in marked contrast to the harmonious and dignified effect of Number 5, with its decorative background treatment.

Photographing The Nose

Alda Jourdan

IN NATURALISTIC posing, all the details of the face and figure are subservient to the controlling animation or particular expression of the moment that incites the exposure. This modifies somewhat the consideration given individual details of a facial form, in the sense that any one of them may be practically obscured by the position or pose, due to the all-important necessity of capturing a description of inward as well as outward form. Nevertheless, those which do appear must be very carefully delineated in order to present the individual likeness accurately. The best means of photographing each feature of the face should be studied, so that the part which each plays in the delineating of expression may be fully understood.

Perhaps the nose is the most difficult feature to deal with in creative posing. The photographer never knows in just what angle he may be expected to record it, and cannot choose a pose which will always be favorable to the particular nose under his consideration. The tendency regarding the picturing of features has progressed beyond the effort to change or idealize. The photographer does not strive to make a large nose look small, nor a small nose large, but he does strive to omit distortion and to

portray naturally. He strives to keep a harmony of tonal balance throughout the facial composition, so that no one feature will attract attention away from the easy reading of the meaning of the expression.

The nose varies in size and shape and facial position, and the more truly such individual characteristics are defined, the more truly is the photograph interesting and valuable. The nose is the feature most easily distorted by the camera, because it protrudes from the face. The difficulty in recording it properly is accentuated for the reason that it is not as important a feature in explaining expression as the eyes or the mouth and yet is apt to command attention by reason of its position and modeling. One looks at the eyes for a key to expression and the nose should not detract too much from the general reading.

The first requisite is to use a lens which will record the best proportion or drawing, and to select a position for the camera which will best represent true proportion. The important factor here is the camera position. The longer the focal length of the lens, the farther away the camera must be if good perspective is to be maintained. Even so it is very easy to find that a nose somewhat large in natural proportion will appear larger in the photograph. We must always remember that the camera, when correctly used, is one hundred percent realistic, and that in this case it records a still and not a motion picture. With all the advantage of a spontaneous attitude, it nevertheless is an arrested record and has a tendency to surprise the observer, whose sense is naturally accustomed to motion. Here is where the art part helps very much, as artistic selection in every step makes for beauty. Fortunately the machine aids in the selection as its easy duplication allows for many records of the face, and so the photo picture is partly mechanically selected.

A long slender nose will appear longer when the head is bent forward and downward. When such poses are to be recorded it is better to have the face in shadow or very soft light, concentrating the modeling more on the head as a whole. The poses which will record a long nose most favorably are naturally those where the head is tilted upward. A front view portrayal is usually preferable although in photography the most truly accurate proportion is obtained from a side or three-quarter view, as the focal plane of the face is then more uniform. (See illustration.) The chubby or upturned nose is shown at best advantage when the head has a tendency toward downward poses.

The ideally portrayed nose is the one showing good modeling, representing the form to be really an object with a top and sides. Poor photographs generally indicate a nose by the shadows between the bridge of the nose and the eyes and the shadows around the nostrils, leaving the shape to the imagination.

The various tones which comprise the building of the nose depend upon the pose and lighting. The top plane is generally the lightest tone, with a highlight near the tip or along one edge of the plane. One side of the nose usually has more depth of tone and the darkest shades outline the drawing. As before mentioned, there is a tendency for this feature to catch an abnormal amount of highlight in many lightings, and sometimes it is necessary to tone down the highlights on the negative or print



Alda Jourdan

in order to more nearly match the visual appearance. There is also a tendency in irregular lighting to distort the drawing of the nostrils by uneven shadows which make one nostril appear smaller than the other. This can be avoided by a careful manipulation of the frontal light (especially if it is a movable light) at the time of exposure, or by retouching afterward.

When considering the modeling of the nose, I am always reminded of the excellent help afforded by elementary drawing lessons, such as are given in standard art schools. Some of the first of the lessons are a study and drawing of a block head. The head is cut entirely in flat planes with only square edges where the curves should be, and it is made for the purpose of simplifying the forms and structures of the face. In studying a nose, it is well to think of it as a flat planed form, as the fact of the top and sides and their different tones is well impressed upon the understanding.

The expression of the face changes the formation of the nose slightly, as a frown tends to contract or narrow its appearance, and a laugh tends to relax and broaden it.

In the matter of focus, the best results are obtained when the focus of the face as a whole is the same from the nose to the ears. This assures a more even proportion, as a sharply defined part against a blurred or diffused part causes a certain amount of distortion. If it is not possible to secure an even focus on account of equipment or position, it is better to accord the foreground which usually includes the nose; the sharpest definition, as that more truly accords with the laws of linear and tonal perspective.

Cinema Section

Edited by
William A. Palmer

To The Beginners

THIS Christmas will probably result in more new movie camera owners than in any other previous Christmas season. Business is good, especially in the photographic industries and the public is now offered better cameras for the same money as well as cameras and projectors at prices lower than was ever thought possible a few years ago. To that large group of tyros who are just learning to talk in millimeters, we wish to give some

advice so that they may get started right. There are plenty of camera owners who have been making pictures for years who could also heed this advice with profit. It seems, though, that the latter group is a hopeless case, for they have been "preached at" by this magazine and others for years with no effect. They still continue in their old erring ways.

So we prefer to talk to a fresh group before bad habits have been formed.

The instruction books supplied with all cameras contain much of the advice that is valuable to the beginner. They contain good and sufficient directions for the mechanical operations of loading and unloading the camera and setting the various controls. But they do not place sufficient emphasis on some points to properly direct the tyro as to what to shoot first and how to shoot it.

Movie Cameras Shouldn't Move

The primary fault of amateur movies is too much camera movement. A moving picture camera is so called because it can take pictures of moving objects which are later shown in motion by the projector. The name, however, gives no permission to move the camera while it is operating. Actually a moving picture camera is a mechanical device for making a large number of still pictures, one after the other, in quick succession. We all know that still cameras should be held steady in order to make snapshots without blurring and there is no difference in principle between the pictures of an ordinary still camera and the individual pictures or "frames" of the moving picture camera. If the movie camera is moved during a scene the "frames" being exposed at that time will be blurred more or less depending upon the rate of movement. A very slow, even movement is not objectionable under some circumstances although it does make it harder to view the detail of the subject properly.

To call this fault of many home movies "camera movement" is really being very polite about it. "Camera swishing" is a better term. But in justice to the camera swishers it should be said that the modern spring-driven hand-held motion picture camera offers great temptations. A hand-held camera is hard enough to keep steady when you are really trying, but when the photographer does not continually keep in mind the need for steadiness, the camera is liable to go off in a series of gyrations almost spontaneously. There is a temptation also to move the camera, because the ordinary cine lens does not have as wide an angle of view as does the eye or the average still camera. Thus when someone attempts to photograph a scene such as the facade of a large building, he finds that the view finder will include only a part of the building. A view from a greater distance would be a help but in many cases a more distant view is not possible due to obstructions. Therefore the photographer proceeds to "paint" the building by swishing the camera horizontally from left to right across the entire width. Having arrived at the extreme right-hand side of the scene, an uncertainty arises as to whether the entire building had been included, so the camera is swished back to the starting point. Thereafter a series of up and down swishes completes the job of "camera painting".

It is understandable that a swishing technique would be tried by someone who had not taken movies before, but when inevitably the resulting pictures are indistinct, blurred, and full of dithers, it is difficult to figure out why the performance should ever be repeated. Yet there are those of our erring cinema brothers who will make a round-the-world tour "camera painting" each and every statue, building, or landscape that meets the eye. If asked about their

method of keeping the camera continually in motion, these people would merely explain that what they are doing is known as "panoramming" or as they affectionately call it "panning", supposedly a well known and accepted technique of cinematography. They are quite right in that panoramming is an accepted technique of camera manipulation but only for very specialized instances.

Panoramming Is Unnatural

Our eyes, because of a characteristic called "persistence of vision" cannot take in the details of anything moving unless it moves at a very slow rate of speed. As a matter of fact, it is this characteristic of the eyes that makes movies possible, for they blend or fuse the individual pictures into an impression of continuous motion. If you study the eyes closely, you find that they never panoram. It seems as though our eyes move in a smooth sweep as we view a landscape, but actually they move in a series of jerks, pausing frequently to be able to register details. The only time when our eyes move smoothly is when they follow a moving object. Notice the eyes of a person reading and you will see that they do not sweep across the page continuously from left to right but move in a series of jerks, pausing three or four times in each line to take in groups of words.

If the eyes can't see things clearly while moving, how can you expect a movie camera to do so?

Panoramming the camera and the resulting blurs are bad enough with black and white film, but it is very much more disturbing with color film. The beginner should remember that the *general* rule for good cinematography is to *keep the camera still*. There is no better way of assuring this than to use a tripod. A tripod naturally adds to the bulk of a movie outfit but the beginner whose mind must be pretty well taken up with focus and exposure adjustments will find it a great aid. The first few rolls of film should be taken with the camera absolutely still in each scene so that one gets accustomed to the usual type. Having mastered this, the tyro can then experiment with the few exceptions when moving the camera is permissible.

When Panoramming Is Permissible

The most common case where it is permissible to move the camera is in following a moving object, especially if it is moving rapidly and at right angles to the camera. In this case the moving of the camera is actually for the purpose of eliminating the relative motion between the camera and object. The moving object is kept in the center of the finder and the unimportant background is allowed to blur. A typical case of this kind of camera movement is to be seen in almost any professional newsreel. For example, in the shots of a horse race, the camera is moved so as to keep the group of racing horses in the center of the field. The background is a complete blur but the horses are clearly portrayed.

A scene too wide for the camera to include in one position and in which it is necessary to show the relation of various parts of the scene, can be photographed by starting at one side and holding the camera still for three or four seconds while the scene "registers". Then the camera can be moved *very slowly* across the scene to the other side where it should be allowed to pause for a few seconds before being stopped. A panoram of this sort is very difficult to do while holding the camera in one's hand, so a tripod is practically a

necessity. The trouble with the hand-held panoram is that there is almost always a slight up and down motion as well as the horizontal one and the combination of the two is very unpleasant.

Of course, there are occasions when a fast panoram and the resulting blur is useful for some special effect, perhaps to create intentionally the impression of confusion or dizziness. The fast panoram has also been used successfully for certain types of "transitions" between motion picture sequences in professional films, but the beginner should not worry at the start about these specialized cases.

What to Shoot

The beginner's first few rolls naturally will be of his family and friends. Too many of these movies in the past have been silly scenes of stiffly posed people ogling the camera with Cheshire grins. Movies have the unique ability of catching life as it is, and so the beginner should start by taking pictures of his family and friends doing something natural to them. It is no great trick to photograph Mother knitting, or Dad washing the car, or Bob playing with his dog, and have them appear natural, because they have something to do with their hands and something to look at other than the camera. In some cases it is possible to take good family pictures in the "candid" manner, but in most cases the best scenes are carefully planned, "unposed" shots. A caution should be given against cutting scenes too short. A scene worth taking is worth sufficient footage so that all the details may be observed. It is easy enough later to cut down the length of a scene if it seems to drag, but no cinema magic available to the amateur will stretch it out.

Winter sports are ideal movie material, but a little difficult for the beginner to photograph well, because of the extremely fast action. Skiing, the most spectacular of all, can be photographed best when the skier is coming toward the camera or going away from it. Under such conditions a point of view can be chosen so that the skier will go through the scene without making it necessary for the camera to be moved. In many cases, though, it is necessary to follow the skier, or he will dash in and out of the scene so fast as to be hardly noticed. Remember, though, that the camera must either be held absolutely stationary or be moved to follow the moving object accurately, keeping it always in the center of the finder. A combination of distant shots of skiing made with a steady camera, interspersed with close and medium shots while the camera follows the action, makes the ideal combination.

What Kind of Light to Use

The most fool-proof type of lighting for beginners to work with is the "box brownie" arrangement of bright sunlight coming over the shoulder of the photographer. Modern movie cameras, however, are not tied to this type of lighting at all, for their lenses are able to admit sufficient light for more subdued conditions. For pictures of people, especially close-ups of head and shoulders, scenes taken in the shade or on slightly overcast days are really more pleasing than those taken in bright sunlight. Reference to exposure charts supplied with the camera or to an exposure meter will solve the problem of how to set the lens for the more adverse lighting conditions. The beginner should not hesitate to try many different types of scenes for even if they don't turn out perfectly, a valuable lesson will be gained.

During the Christmas season and throughout the winter months, most of our activities take place indoors. So naturally the beginner will want to know: Can I take interiors successfully? Pictures taken with artificial lighting are more difficult than ordinary daylight scenes, but if the neophyte is willing to follow a few simple directions there is no reason why his interiors should not be as successful as his outdoor scenes. At the start, it is suggested that the new camera owner provide himself with three No. 1 Photoflood lamps in reflectors. The reflector units can be the rugged aluminum bowls on tripod stands or merely the inexpensive cardboard reflectors placed on bridge lamps. The three lights should be set up with two on one side of the camera and the third on the other. This will give a more pleasing effect than if the light were equal on both sides. The lights should be placed about four feet from the subject and a little higher than the subjects head. With super sensitive panchromatic film in the camera, good pictures will be obtained with a lens setting of about $f:3.5$. A photoelectric exposure meter is very valuable for judging the exact exposure with artificial lights, but since film has a great deal of latitude the above setting will do very well for most all locations.

With the lamps set at four feet from the object, it will be found that the scenes will have to be close-ups or medium close-ups. Lighting bigger scenes requires more equipment and adds other complications, so it is better for the beginner to stick to a simplified formula: three Photoflood units four feet from the subject, exposure $f:3.5$ with super sensitive film and the camera *held still*.

Questions and Answers Concerning Type A Kodachrome

Question: Is Type A Kodachrome, used with the filter for daylight, as good as Regular Kodachrome?

Answer: Yes. In fact, some users feel that the color rendering of Type A film with the daylight filter is superior to the color rendering of Regular film. The sensitivity of the film is the same as Regular, when the filter is used, and the only inconvenience is the necessity of taking all outdoor shots with a filter in place. To offset this is the elimination of the need for changing the film when interiors and exteriors are photographed in succession.

Question: Is it necessary to cut out all daylight when shooting interiors on Type A Kodachrome?

Answer: For strictly accurate color rendering, all daylight should be excluded, but in many cases the bluish color of daylight makes a very pleasing effect when combined with Photoflood illumination. The daylight can be used as side or backlighting while the artificial illumination furnishes the basic front light.

Question: Can satisfactory surgical movies be taken on Type A Kodachrome using the regular operating lamps instead of Photofloods?

Answer: Yes. The color values are a little more redish, but this is no disadvantage since there are practically no blue tones in the operating field. The usual amount of diffused daylight from the operating room windows will somewhat offset the high red of the mazda lamps.



"Mutterglueck"

Ivo Gogala

Advanced Medal Print

■ Aside from its several other obvious merits this picture offers an excellent illustration of good figure posing. Notice how each line of the woman's figure carries the eye upward toward the climax of the movement, and notice that the figure does not appear to be simply holding the child aloft but to be actually in the **processes of lifting**. This condition imparts a certain verve, a feeling of rightness that marks the difference between success and failure in such an attempt. Observe that one can sense the muscular coordination in the figure in spite of the clothing. How does the photographer arrive at a satisfactory pose of this sort? First he observes the action to eliminate any awkwardness and to see that the main lines of the figure are well established and in keeping with the composition. In this case he makes sure that the model places the right foot slightly behind the left, and that she arches her back, for these two conditions establish the graceful curve of the figure. He knows that he must make his exposure just as the movement reaches its apex, so that the curve of the right arm will echo the curve of the figure as a whole, and so that the figure of the boy will convey a feeling of upward movement, and not sag downward as it will as soon as the movement is completed. This last point is of particular importance for if the exposure were made after the movement was completed the muscular condition in the two figures would be entirely different. The buoyant quality, the feeling of upward movement that is so pleasing in the present print would then be lost.

Data: 6x6 cm. Voigtlander Superb; E. K. Panatomic; 11 x 14" print on Agfa bromide.

*"Bottoms Up"*

Dorothy Kniss

■ We might as well confess that this picture does not seem quite as successful to us as it did to the other members of the jury. We agree that the two qualities which they found attractive are present; a certain amusing quality especially when the title is taken into consideration, and a well planned arrangement. To our eyes however neither quality is sufficiently strong to really put the picture over. The composition is good, except for the one false note created by the detached arm in the upper left corner. But is the pattern established sufficiently to make the picture really effective as a design? The subject matter does have amusing connotations but unless our sense of humor has deserted us these seem too slight to fully earn the picture its present position. All of which goes to show that the judging of pictures is far from being an exact science. It also gives us an opportunity to work in a few remarks about the fine sportsmanship shown by the contributors to these competi-

tions. Obviously they haven't always agreed with the jury, but over a period of five years we have received only two complaints and these were evidently from people with no understanding of picture values. One stated that we never accepted a single picture of any artistic merit. The other felt that his rejected prints were much superior to anything shown, and offered as proof the fact that they had been exhibited in some salon twenty years ago. We think this record also shows that our jurors have done a fine job. We congratulate them and record our gratitude to the following men who have served in various combinations of three with the editor of this magazine: P. Douglas Anderson, F.R.P.S., Horace Bristol, W. E. Dassonville, John Paul Edwards, Fred C. Frey, G. H. Harding, Stanley R. Jordan, Lucian Perona, Otto C. Schulte, Wm. Horace Smith, Ralph Young.

Data: Leica; Summar lens; 1/100 sec. at F:6.3; 11 x 14" print on Defender Velour Black B.

Third Award

Advanced Class

■ This picture fairly grabs the attention with its brilliant lighting and strong masses of light and shade. It then proceeds to hold that attention with ease because of the interesting subject matter and the wealth of detail which delights the eye. Observe that the back lighting aids the composition considerably by supplying the shadow masses in the foreground. The picture would lose much of its punch without them. We do not wish to entirely eliminate the slight tendency for the eye to travel to the upper right corner after it has thoroughly inspected the more interesting parts of the picture. This can function as a sort of release for the eye. However we do feel that

*"The Tired Team"*

Paul Wall

(Continued on page 592)

Fourth Award

Advanced Class

■ It is the fine subtlety of Mrs. Fletcher's arrangements which make them so satisfying to the observer. Notice how very delicately the emphasis has been placed upon the blossom at the extreme right. It is just a little larger, has just a little stronger position in the picture space, receives just a little more accent from the lighting, and faces the camera at just a little more attractive angle than the others.

We do feel, partly because of this emphasis to the right that the mass of blossoms could stand just a shade more support from the dark tones at the base. If one of the leaves could have been carried a bit further to the right, say just below the center of the principal blossom, we think this matter would be well taken care of.

Data: 5 x 7" Century View; 8" Rapid Rectilinear lens; approx. 20 secs., at F:32, on Defender X. F. Pan., in D-76; by combination of daylight and artificial light; 11 x 14" print on Defender Velour Black C, in M. Q.



"Begonia"

*Christine B. Fletcher
San Francisco, Calif.*



"Summer Day"
*Maks Gliha
Jugoslavia*

Fifth Award

Advanced Class

■ Here we find a rather diab landscape made startling and dramatic by being seen through a distinctly unique frame. Actually the "frame" is the strongest part of the picture, but observe that in spite of that it is quite necessary to carefully relate the compositional elements of the landscape with the frame in order to achieve a satisfactory arrangement. After the eye has somewhat absorbed the terrific impact of the foreground material it travels into the picture along the line formed by the transition from harvested to unharvested field. Notice that this leads the eye easily toward the peak of the hill and that the cloud form ties in with the hill-top so that the eye is coaxed along the cloud toward the upper left. Here it again encounters the foreground frame, so the process may be repeated indefinitely. Notice also how the shadow in the foreground helps justify the large mass of dark tone at the top of the print.

Data: Bromide print 11 x 13".



"Fisherman's Wharf"

F. Preston Wilcox

Amateur Medal Print

■ Having attempted a number of shots in this same locality we know that this is difficult material to handle. Bright colored hulls, masts, piling and whatnot are scattered about in the wildest confusion. Consequently Mr. Wilcox deserves special commendation for his success in achieving order out of chaos. The scene has been nicely photographed so that aerial perspective is well maintained. We have three things to complain about. First we would trim from the top until the line of small windows along the top of the wharf are eliminated. There is plenty of directional movement into the picture without this line of windows. Because they form a sharp, direct line they tend to speed up the movement unnecessarily. The movement of the eye is much more satisfactory when this line is removed. Second, it is unfortunate that the top single pile at the right of the print coincides almost exactly with the waterline of the white boat behind. Such accidental conjunctions as this are undesirable because they catch the eye. Not until we had made a mental note about our second point did we so much as notice that there is a bird perched on top of the single pile we have been talking about. This bird has either been retouched in, or if it was there, moved during exposure and an attempt has been made to sharpen it up by retouching. It should be evident however that we do not want an accent at this point, for it can only detract from our main interest and interrupt the orderly movement of the eye.

Data: Leica; 50 mm. Elmar; E. K. Background film, in DK-76; 8 x 10" print on Artex, in Amidol.

Second Award

Amateur Class

■ This picture will appeal most to those who enjoy a nice composition for itself alone. The relationship between the three points made by the feet and the ball, and the form of the cast shadow, is very nicely adjusted. By trimming at the base of the print Mr. Enos has allotted just the proper amount of weight to the shadow form, and has at the same time placed the ball (which is the center of interest) in the strongest part of the picture space.

Data: Leica; 8 x 10" bromide print.



"Getting the Line"

F. J. Enos
San Francisco, Calif.

Third Award

Amateur Class



"Influencing The Jury"
L. J. Spuller, Jr.
San Francisco, Calif.

■ "It's a lie," says the jury. "No such pretty girl ever whispered in our ear."

Data: 6 x 6 cm. Rolleiflex; 1/50th sec. at F:11; E. K. Panatomic in DK-76; 8 x 10" print on Agfa Brovira Kashmir, in Dassonville M.Q.

*"Lincoln"*

*Roland Calder
San Francisco, Calif.*

however the figure is looking straight ahead, and when we consider that fact combined with the dignity of the subject and the reverence associated with the name of Lincoln we can see that a more formal, or classical form of composition is justified. Because of that, and also because there is just a little too much stray light in the lower left corner, we prefer to trim from the left until the head is in the exact center with respect to left and right.

Data: 4 x 5" Speed Graphic; 6½" Schneider Xenar F:3.5; taken at night; 10 minutes at F:22, on E. K. Panatomic in DK-76; 8 x 10" print on E. K. P.M.C. No. 11, in Amidol.

■ This is one of the most effective photographs of this statue of Lincoln (in the Lincoln Memorial, Washington, D. C.) which we have seen. It is successful because the lighting gives such well placed emphasis with desirable subordination of unnecessary detail in the base of the monument. Most interesting point for discussion concerns the placing of the head in the picture space. Ordinarily we would allow slightly more to the right of the head than to the left since the camera position inclines the head slightly toward that side of the print. Actually

Fifth Award

Amateur Class

■ This picture is attractive because it is such a nice clean straight-forward photograph of the subject, and because the picture is full of life and animation. Our one disappointment with the picture concerns the spacing. Ordinarily this would be satisfactory as it is, but because the dangling tongue is such an important element in this case one gets the feeling that the whole form is just a little too low in the picture space. We would like to see about one-half inch added to the base of the print, about one-eighth to the top and about one-quarter to the right side. We think that improvement would result from such spacing.

Data: 6 x 6 cm. Voigtlander Superb; 5 cm. Heliar; 1/50th sec. at F:6.3, on E. K. Panatomic, in Agfa Fine Grain; bright sun in Sept.; 8 x 10" print on Mimosa. in M. Q.; Blue toned in Gold Chloride.

*"Hassan"*

*H. R. Staiger
New York, N. Y.*

Monthly Competitions

Scoring for Club Trophy Cups

The following won prizes for their clubs in the Advanced Class: Dorothy Kniss and Paul Wall, for the Fort Dearborn Camera Club; Ivo Gogala and Maks Gliha, for the Fotoklub Ljubljana; and Christine B. Fletcher, for the Photographic Society of San Francisco.

The following won prizes for their clubs in the Amateur Class: F. J. Enos, for the E.P.I.C. Pool; L. J. Spuller, Jr. and Roland Calder, for the Photographic Society of San Francisco.

The following prize winners have no club affiliations: F. Preston Wilcox and H. R. Staiger.

STANDING OF CLUBS

Large Clubs Advanced Class

Fort Dearborn Camera Club.....	45
Fotoklub Ljubljana	45
Los Angeles Camera Club.....	18
Photographic Society of San Francisco..	13
Fotoklub Zagreb	4
Miniature Camera Club of New York....	2

Small Clubs Advanced Class

The Camera Clique.....	27
Baltimore Camera Club.....	6
The Pack Rats.....	2
East Bay Camera Club.....	1
Washington Pictorialists	1

Large Clubs Amateur Class

Photographic Society of San Francisco	9
Golden Gate Miniature Camera Club....	4
Los Angeles Camera Club.....	4
Miniature Camera Club of Oakland.....	3

Small Clubs Amateur Class

E.P.I.C. Pool	30
Aluminum Camera Club.....	13
Washington Pictorialists	11
Riverside Camera Club.....	9
Oklahoma Camera Club.....	7
St. Louis Camera Club.....	7
Camera Club of Richmond.....	5
Kamera Kranks	5
Nassau County Camera Club.....	5
Norfolk Photographic Club.....	5
Taft Camera Club.....	5
East Bay Camera Club.....	4
Crockett Photographic Society.....	2
San Jose Camera Club.....	1

Contributing Clubs For The Year

*Aluminum Camera Club (New Kensington, Pa.)
 *Amherst Camera Club (Mass.)
 *Avon Old Farms School Photographic Club (Conn.)
 Baltimore Camera Club (Md.)
 Boston Union Camera Club (Mass.)
 Boulder Lens Club (Colo.)
 Brooklyn Camera Club (N. Y.)
 Buckeye Camera Club (Cincinnati, Ohio)
 Calgary Photographic Society (Canada)
 *California Camera Club (San Francisco)
 Camera Art Circle (India)
 Camera Art Group (India)
 *The Camera Clique (St. Louis, Mo.)
 Camera Club of Ottawa (Canada)
 Camera Club of Richmond (Va.)
 Camera Guild of Larchmont (N. Y.)
 Capitol City Camera Club (N. D.)
 Champaign-Urbana Camera Club (Ill.)
 Chattanooga Camera Club (Tenn.)
 Columbia Camera Club (S. C.)
 Crockett Photographic Society (Calif.)

Danville Camera Club (Ill.)
 Denver Lensmen (Colo.)
 East Bay Camera Club (Oakland, Calif.)
 *E.P.I.C. Pool of San Francisco
 Expo Kamera Klan (Los Angeles, Calif.)
 *Fort Dearborn Camera Club
 The Fotoforum (London, Canada)
 *Fotoklub Ljubljana (Yugoslavia)
 Fotoklub Zagreb (Yugoslavia)
 Fox Valley Camera Club (Aurora, Ill.)
 Fresno Camera Club (Calif.)
 Golden Gate Miniature Camera Club (San Francisco)
 Hartford County Camera Club (Conn.)
 Humboldt Camera Club (Eureka, Calif.)
 Huntington Park Camera Club (Calif.)
 Jamaica Camera Club (N. Y.)
 Japanese Camera Club (San Francisco)
 Kamera Kranks (Durham, Calif.)
 Knoxville Camera Club (Tenn.)
 *The Lens Club (Topeka, Kansas)
 *Long Beach Camera Club (Calif.)

(Continued on page 593.)



The Winners

Large Clubs—Advanced Class

Fort Dearborn Camera
Club, Chicago, Ill.

Fotoklub Ljubljana
Ljubljana, Jugoslavia

Small Clubs—Advanced Class

The Camera Clique
St. Louis, Mo.

Large Clubs—Amateur Class

Photographic Society
of San Francisco
San Francisco, Calif.

Small Clubs—Amateur Class

E.P.I.C. Pool
San Francisco, Calif.

The End—The Beginning

For the fourth time we reach the annual conclusion of the scoring for the Club Trophy Cups. After running neck and neck for the past several months with first one club ahead and then the other, the Fort Dearborn Camera Club, and the Fotoklub Ljubljana wind up the scoring in a tie. There is perhaps a certain justice in such a finish, and cups will therefore be awarded to both clubs. Scoring for next year's trophies begins with the judging for the January issue, this judging taking place on December first. Will contributors please take notice of the fact that prints are judged on the first day of each preceding month. That is, judging for the awards announced in the March issue is held February first, etc.

(Continued from page 586)

the pull toward this corner is perhaps a shade too strong at present due principally to the brightness of the two horizontal lines toward the top. If these are killed we think the picture is brought into excellent balance. Cover the two lines with a finger and see if you agree.

Data: Contax; 5 cm. Sonnar F:1.5; 1/50th sec. at F:8, on E. K. Panatomic; 11 x 14" print on Agfa Brovira.

- Los Angeles Camera Club
Midwood Camera Club (Brooklyn, N. Y.)
Miniature Camera Club of New York
Miniature Camera Club of Oakland (Calif.)
Miniature Men (Cleveland, Ohio)
*Montreal Camera Club (Canada)
Nassau County Camera Club (N. Y.)
New York Edison Club
*Niagara Falls Camera Club (N. Y.)
*Norfolk Photographic Club (Va.)
Oregon Camera Club (Portland, Ore.)
Orleans Camera Club (New Orleans, La.)
The Pack Rats (Pasadena, Calif.)
Palo Alto Camera Club (Calif.)
Panama Pictorialists (C. Z.)
Paramount Camera Club (Glendale, Calif.)
Pasadena "Y" Camera Club (Calif.)
Photo Pictorialists of Springfield (Mass.)
*Photographic Society of San Francisco
Pictorial Photographers of America
Queen City Pictorialists (Cincinnati, Ohio)
Regina Camera Club (Canada)
Riverside Pictorialists (Calif.)
San Jose Camera Club (Calif.)
Schenectady Photographic Society (N. Y.)
Sierra Camera Club (Sacramento, Calif.)
Spaulding-Moss Company Camera Club (Boston, Mass.)
Springfield Camera Club (Ill.)
St. Louis Camera Club (Mo.)
Stamford Camera Club (Conn.)
The Sump Ducks (Wilmington, Calif.)
Taft Camera Club (Calif.)
Telephone Camera Club of Manhattan
Toledo Camera Club (Ohio)
*Washington Pictorialists (D. C.)
West Suburban Camera Club (LaGrange, Ill.)
Worcester Photo Clan (Mass.)
Yakima Camera Club (Wash.)

*Denotes clubs competing in December competition.

Notes and Comments

Fourth Annual Zeiss Ikon Exhibition

Users of Zeiss Ikon Cameras equipped with Carl Zeiss Lenses are cordially invited to submit pictures for inclusion in the Fourth Annual Zeiss Ikon Exhibition which will undoubtedly be, as in past years, one of the outstanding exhibitions of the season. The closing date for the receipt of prints is the thirty-first of December with the showing of the exhibition in various cities throughout the United States commencing in New York in January, 1938. Now is the time to go over your negatives and prints in order to make the selection for your entry, for time is fleeting and, as with all exhibitions, it is better to avoid delays in the mail and the last minute rush by sending your entry in early. All prints accepted for exhibition, unless secured by arrangement for permanent display, will be returned at the completion of the travels of the Exhibition with the Carl Zeiss 1938 Exhibition Label attached to the back of the mount. If secured for permanent display, the label will be forwarded for attachment to the exhibitor's duplicate print.

Carl Zeiss, Inc., have announced that as in the past there is no restriction as to subject matter, and it is their desire to show the various ways in which photographers are applying Zeiss Ikon Cameras in pictorial, commercial, industrial, theatrical, press, color, candid, scientific, and medical photography, as well as the many other

uses and applications of photography in American life and industry. Color pictures, whether in the form of prints or transparencies, halftone or photo-lithographer's proofs, will be exhibited with full credit to all concerned in the making of such pictures, but hand-colored prints will not be accepted. While only a limited number of transparencies can be exhibited, provision will be furnished for showing these to their best advantage.

It is preferred that finished prints, unmounted so as to facilitate mounting on standard 16"x20" exhibition mounts and measuring from 8"x10" to 11"x14", be submitted for consideration, although negatives or test prints will be acceptable for preliminary consideration. Transparencies may be mounted or unmounted, while color prints or proofs should be unmounted since they must be mounted under a matte as well as a transparent protective surface.

All entries should be sent to Carl Zeiss, Inc., 485 Fifth Avenue, New York, N. Y., marked "FOR ANNUAL EXHIBITION," no entry blank being required. Data concerning each entry should be plainly indicated, and the entrant's address as well as name should accompany the entry. Immediate acknowledgement of each entry will be made on receipt, stating quantity and condition in which received. Prints not accepted for exhibition will be returned to the exhibitor shortly after the commence-

ment of the Exhibition, while those included in the Exhibition will be returned immediately after the completion of its travels.

The Annual Zeiss Ikon Exhibitions have attained an enviable reputation, and it is suggested that such of our readers as use Zeiss Ikon Cameras be sure to send some of their pictures to Carl Zeiss, Inc., at 485 Fifth Avenue, New York, N. Y., at an early date. The rules as given above are not complex and easily observed. Although sponsored by a commercial organization, the Annual Zeiss Ikon Exhibition is so well-selected and carefully arranged as to rank with the better salons, full credit being given to the maker of each print as well as to any other firm or organization entitled to such credit. If you use a Zeiss Ikon Camera, entrance in this Exhibition should be on your must list. Remember the closing date—the thirty-first of December—and get your prints in well before then.

Abe Cohen's Exchange Features Christmas Values

Through the cooperation of the Ihagee Company, Abe Cohen's Exchange, Inc., 120 Fulton Street, New York City, are able to offer exceptional Christmas values in Ihagee Cameras.

Among the cameras listed in the Christmas list are the Ihagee-Duplex, Ihagee-Parvola and Ihagee Auto Ultrix, with a wide selection of lens equipment. Abe Cohen's Exchange are also featuring in their Christmas specials the Multifax, Laborant and Ideal Enlargers.

All this equipment is offered on the usual ten-day trial basis which is a feature of this firm's service.

Write Abe Cohen's Exchange, Inc., at the above address for complete details.

Don Loving to Instruct at Art Institute of Chicago

Don Loving, of Legare-Loving, Photographers, in the Chimneys, Greenbay Road, Winnetka, Ill., has this week been appointed Instructor in Photography at the Art Institute of Chicago. He succeeds Charles Harris Miller, color photographer, who inaugurated the course and who has been teaching it for the past two years.

The Art Institute has been overwhelmed

with interest in photography, and has had to turn away nearly as many applicants as could be accepted. The course runs for 36 weeks, divided into three groups of twelve weeks each—Elementary, Intermediate, and Advanced. Adequate technical instruction is given the beginner to enable him to use his hand camera effectively, with supervised dark-room procedure; the advanced students are guided toward the use of the camera as an expressive instrument, and are inspired to explore the fullest possibilities of the photographic medium as either a profession, an avocation, or as an artistic interpretation of objective realism.

Mr. Loving has had several years of art training in Chicago. He has had extended experience in professional photographic portraiture with some of the largest and most nationally known studios. He is a member of the Royal Photographic Society of Great Britain, The Photographic Society of America, and the Fort Dearborn Camera Club, one of the most active in this country.

The Legare-Loving Studio has been in the Chimneys at Indian Hill in Winnetka for the past three years. Legare-Loving will reopen within the next ten days a newly enlarged and more interesting studio, also in the Chimneys.

Free Pamphlet on Paper Negative Technique

Few too few photographers realize that Dassonville Charcoal Black Grade F also known as "Opaline Parchment . . . Extra Thin", is a paper which is superbly adapted to the paper negative process. It is remarkably translucent because of the parchment-like quality of the paper base. For the same reason the grain of the paper is very pleasing, and it can be emphasized or almost eliminated, in the paper negative, depending upon the technique used. After exhaustive tests Mr. Dassonville adopted four paper negative procedures, which range from the process giving the least grain in the finished print from the paper negative, to that giving a pronounced grain for broad effects. These procedures are given in step by step form in a pamphlet which has just been re-

printed. For a time this pamphlet was included in packages of the paper but it is now supplied only on request. It will be sent free of charge to any Camera Craft reader who sends a three-cent stamp to the Dassonville Co., Ltd., 447 Minna St., San Francisco, Calif.

High Speed Agfa Film Available for 35mm. Cameras

Three times faster than regular high speed films of the "Super" type heretofore supplied, a new 35mm. film, Agfa Ultra-Speed Panchromatic for miniature cameras, is now being manufactured by Agfa Anseo Corporation in Binghamton, New York.

Although improvements in film sensitivity have in the past been made a small amount at a time, the increase in light sensitivity of this new film is of such magnitude that exposures may be made with $1\frac{1}{2}$ lens stops less exposure than was formerly necessary. Combined with its phenomenal high speed, Agfa U. S. Pan film has excellent keeping qualities and wide latitude.

Agfa Ultra-Speed Panchromatic will prove ideal for stage photography, candid camera work and other conditions requiring maximum film speed. The film is available in a new, reloadable type, 36-exposure daylight-loading cartridge for the Leica and similar cameras, and in a 36-exposure daylight-loading spool for the Contax and similar cameras. It will also be supplied in a 15-exposure darkroom loading length for all 35mm. cameras; in $27\frac{1}{2}$ -ft. and 55-ft. containers of film notched and tongued for easy division and darkroom loading in 36-exposure lengths; and in 160-ft. lengths of unnotched film.

Dufaycolor Booklets

Dufaycolor, Inc., are distributing free upon request two booklets on Dufaycolor Film, entitled "Directions for Developing and Helpful Hints" and "Dufaycolor in Artificial Light." These little handbooks contain much valuable information on the use and handling of Dufaycolor, the Natural Color Film. Write Dufaycolor, Inc., 30 Rockefeller Plaza, New York, N. Y., for your copies.

Roll-O-Pod Tripod

Intercontinental Marketing Corp., 10 East 40th Street, New York City, agent for



Roll-O-Pod

the Robot Camera, announce that they have taken over the distribution of the new Roll-O-Pod Tripod, claimed to be the most compact tripod ever built. When closed, the Roll-O-Pod has the shape of a smooth round box, 3" dia., $1\frac{1}{2}$ " high, small enough to fit into the vest-pocket. When set up, the Roll-O-Pod is high enough for most practical purposes (40") and rigid enough to support a fairly heavy camera. As an additional feature, the Roll-O-Pod is provided with built-in swivel top.

The casing of molded bakelite acts as the tripod head when the Roll-O-Pod is set up. Each leg consists of one strip of high grade Swedish steel, entirely rigid when straight, yet of such cross-section that it rolls up easily inside the bakelite casing.

The Roll-O-Pod has no delicate parts, nothing to get out of order. It is a well-built accessory, meant to give years of service, and seems destined to fill the long-felt demand for a truly compact tripod.

The Intercontinental Marketing Corp. is also distributing a very interesting free booklet on the use of the Robot Camera. Dealers may obtain a supply upon request and interested photographers may secure them from their local camera store or direct by writing the above address.

The Alan Photo Meter

The Alan Photo Meter, invented by Dr. J. Louis Freibrum, M. D. of Los Angeles, is a handy, new disc-shaped universal exposure guide selling through photographic

dealers everywhere for only \$1.00. It is designed for use with all cameras.

This is a complete and compact encyclopedia of useful photographic facts for all daylight exposures, 4" in diameter, simple and fast to operate. All conditions, climatic, atmospheric, etc. that go to make a good picture are considered by the Alan Photo Meter. A few turns and you have the proper lens opening and correct shutter speed for any desired picture. It will give you the correct shutter speed to use to stop any motion, regardless of camera used, the distance, speed or direction of the subject. It will also correct for all filters.

A valuable aid to electric and visual meters, the Alan Photo Meter is equally adapted to box cameras, folding cameras, miniature and candid cameras, moving picture camera users and professionals. It is the only meter especially adapted for box and folding cameras . . . indicating correct "Time" and "Bulb" exposures.

Further details from Alan Photo Meter Company, 1037 South Olive Street, Los Angeles, California.

Introducing the Exakt!

The Exakt enlarger, a new Henry Herbert import, should receive immediate public acceptance because of its extreme ease of operation and unlimited scope. The Exakt has all the conveniences of an automatic enlarger with the added attraction of an additional HAIRLINE adjustment that guarantees absolute focusing. Apart from the ideal focusing and solid construction, special value is attached to the interchangeability of the lenses. If, instead of the normal negative, it is desired to make the greatest possible enlargement of a smaller size or part negative, then a tube with a lens of shorter focal length is attached in a few seconds. Thus it is possible to supply, instead of two or three instruments, a universal enlarger at a price no greater than usually paid for a precision instrument. If you desire any further information, write Henry Herbert, 483 Fifth Avenue, New York City.

Free Booklets on Rolyn Photo Products

Robert M. Lynn, photographic supply company, offers you four descriptive folders on the newest ROLYN PHOTO PRODUCTS now stocked by dealer stores everywhere.

One features the ROLYN Mask for Argus enlarger. The mask handles enlargements up to 9" x 11" with a maximum border width of 1". It is easily attached onto the baseboard of your enlarger and may be assembled in a few minutes.

Attracting considerable interest is the new ROLYN Arc-Lens Shade, a most practical accessory for photographing against the light. This Arc-Lens shade protects your camera lens from direct glare and eliminates light reflections. Instantly attached to your camera and grips firmly.

Just off the press is an attractive booklet on the ROLYN Optical Glass Filters, with much helpful data for you.

Another pamphlet available to the amateur photographers is the ROLYN Rapid Print Dryer circular describing this sensational dryer which makes it possible to dry prints at an average speed of 4½ minutes with a maximum of 600 assorted sizes per hour.

Any or all of these new folders may be obtained free from your dealer or by writing direct to Robert M. Lynn, 923 South Grand Avenue, Los Angeles, Calif.

Harrison Color Meter for Kodachrome

Harrison & Harrison, Optical Engineers, have developed the Harrison Color Meter which measures the color of light, and a set of six meter-matched filters, for use in shooting Kodachrome. A reading is taken with the meter and the calibration indicates which one of the six filters to use to compensate for the lighting conditions of the moment. This is the first meter developed that takes into consideration the color condition present at each individual exposure.

Harrison & Harrison also manufacture filters for black and white photography as well as other photographic equipment. Write Harrison & Harrison, 8351 Santa Monica Blvd., Hollywood, Calif., for further details and descriptive booklets.

The New Lynch Daylight Developing Tank

James T. Lynch announces the new Lynch Daylight Developing Cut Film and Filmpack Tank. Presented in a radically new design, the new tank uses only 32 ounces of fluid and all sizes of the film rack fit into one tank eliminating the cost of extra tanks where several sizes of film

are used. Construction is entirely of bakelite and stainless steel as these materials are resistant to all developing agents.

List price of the tank, complete with one rack of any size, is \$7.50. See the New Lynch Tank at your local dealer's or write to James T. Lynch, 303 S. Cincinnati, Tulsa, Okla., for further details.

Color Prints from Your Own Transparencies

The Ruthenberg Color Photography Co., 4961 Sunset Blvd., Hollywood, Calif., pioneers in making commercial color prints, are now offering 8 x 10 inch "Colorstil" prints from minicam Kodachrome positive transparencies at the price of \$5.00. This low price is made possible by the Ruthenberg firm's patented "Colorstil" process. Prints made by this process are natural in color, permanent and may be had in either a glossy or semi-matt surface. A feature of this process is that color correction is possible if desired. The Kodachrome Transparencies are not affected in any way by the "Colorstil" Process and are returned to their owners in their original condition. As not all transparencies are suitable for the making of prints, the Ruthenberg Co. reserves the right to refuse any order in which they believe the original is unsatisfactory for good results. Delivery time is about three days from the receipt of the order, although a few days longer may be needed for large orders.

Write the Ruthenberg Color Photography Co. at the address above for further details.

New Film Chest Negative File

Central Camera Company, 230 South Wabash, Chicago, Ill., are ready with this new article of their own manufacture, namely, a Film Chest Negative File.

The Film Chest, complete for \$2.75, affords a speedy system for filing as many as 3600 35mm. negatives or a correspondingly large quantity of negatives of other sizes up to and including $2\frac{1}{2} \times 4\frac{1}{4}$ films. Humidifier pad and bottle of humidifying solution are included, the application of which keeps the film in good condition. Film Chest is not only a systematic file but also a means of preserving negatives. Film Chest contains 100 envelopes with imprint providing for data on each negative stored therein. These envelopes are filed under 10



Film Chest

general classifications (10 divider cards). Each envelope contains a folded transparent sheet, which allows for placement of 6 strips of film without possibility of scratching. Heavy all metal box in gray crackle finish. Balanced handle on lid. Measures $10\frac{1}{2} \times 6\frac{1}{2} \times 4\frac{1}{8}$ inches.

New Speed Graphic Camera

A brand new Speed Graphic camera in size $2\frac{1}{4} \times 3\frac{1}{4}$ and with Revolving Back has just been announced by the Folmer Graflex Corporation of Rochester, N. Y. The new camera, which gives the Speed Graphic user new economy through its smaller picture size and new versatility by means of its Revolving Back, is now on display at representative photographic dealers'.

The Revolving Back feature of the new $2\frac{1}{4} \times 3\frac{1}{4}$ Speed Graphic gives this camera vastly greater convenience by enabling either horizontal or vertical pictures to be made with equal facility. A touch of the finger turns the Revolving Back to allow the taking of both horizontal and vertical subjects without changing the position of the camera itself. It is the first application to a Speed Graphic camera of the Revolving Back principle which has met with so much favor in other Graflex-made cameras.

The new Speed Graphic may be had with coupled range finder for quick-action focusing. When equipped with coupled range finder and photoflash synchronizer the $2\frac{1}{4} \times 3\frac{1}{4}$ Speed Graphic with Revolving Back affords the owner an extremely wide picture-making range—either day or night.

The new camera possesses all the regular Speed Graphic features in addition to the

ones mentioned above. These include focal plane shutter, long bellows draw, eye-level view finder, wire frame finder and peep-sight, rising and falling front, removable lensboard and interchangeable lenses either in barrel or mounted in between-the-lens shutters for photoflash work.

New Eastman Kodak Case Designed in Book-Fashion

A radically different camera case, opening book-fashion and containing a "plus" compartment that holds film, exposure meter, range finder and other handy accessories, is now obtainable for the Kodak Six-20 camera, the Eastman Kodak Company announces.



Six-20 Duplex

Known as the "Six-20 Duplex," the case is made of fine-quality, smooth brown sole-leather and lined with brown corduroy. A slide fastener on three sides permits the book-style opening and a corduroy-covered separator, with snap-button fastener, closes the extra equipment side. Construction is rigid, not soft, and provides ample protection against the bumps and shocks of outdoor use.

The case is $6\frac{7}{8}$ inches long, $3\frac{7}{8}$ inches wide, and $3\frac{3}{16}$ inches thick when closed. Both hand and shoulder straps are provided. The case is priced at \$8.00.

New Burke & James All-Metal Enlarging Easel

Burke & James are now in production on a new, all-metal enlarging easel, designed to accommodate all sizes of paper to 11x14 inches. While it is possible to make good enlargements without an easel—the fact remains that with an easel we can be sure the paper is held flat, that the white mar-

gins around the print will be even, that focusing the image is easier. The masking bands on this new enlarger are so mounted to the frame that perfect right angle alignment is maintained regardless of the size print being made. This new easel is fully described in a new catalog which may be had by addressing Burke & James, Inc., 223 West Madison St., Chicago, Illinois.

The Exacto Automatic Enlarger Switch

The Exacto Automatic Enlarger Switch, developed by the S. & A. Instrument Co., offers a way of insuring accurate exposure time and uniform prints without wasting valuable paper.

The Exacto is a high grade efficient instrument powered with a synchronous self starting motor that guarantees accuracy and long service. It may be applied to many uses and saves on paper costs and operating time.

For complete details write for a descriptive booklet to the S. & A. Instrument Co., 216 No. Vermilion St., Danville, Ill.

New Superflash Photolamp No. 3

The Wabash Photolamp Corp. announce the New Superflash Photolamp No. 3. The new bulb gives a total volume of illumination approximately three times that of the Superflash No. 2 and it was designed primarily for professional purposes. Commercial photographers and newspapermen will find its efficiency a considerable aid in their work.

The new Superflash No. 3 is especially recommended by the manufacturers for distance and large area shots, for color photography and for high speed action shots.

Write for a complete description to the Wabash Photolamp Corp., 335 Carroll St., Brooklyn, N. Y., or see them at your dealer's.

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